Drug Markets

November 1930

Established 1914

The Magazine of the Manufacturing Drug Trade

Editorials 433

Capper-Kelly Facts—Caution Needed—Respect for Rights Misleading Indications—A Change Ahead—Snap and Vigor More Cod Liver Oil.

Feature Articles

Why the Capper-Kelly bill Must Not Pass 437
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Fine Chemicals 491
Perfumes and Flavoring Materials 502
Crude Drugs 508

Drug Market Place 518

Buyer's Guide 420

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VOL. XXVII **DRUG MARKETS, INC.** NUMBER 5

PUBLISHERS

Publication Office, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 101 W. 31st St., N.Y. City

Editor THOMAS R. FARRELL

Business Manager FRAZER V. SINCLAIR

PUBLISHED MONTHLY AT PITTSFIELD, MASS., SUBSCRIPTION PRICE, TWO DOLLARS A YEAR, IN ADVANCE, POSTAGE PAID TO ALL COUNTRIES, THREE WEEKS' NOTICE IS REQUIRED TO CHANGE SUBSCRIBER'S ADDRESSES, AND WHEN NOTIFYING KINDLY GIVE BOTH OLD AND NEW ADDRESSES; PRINTED BY THE SUN PRINTING COMPANY, PITTSFIELD, MASS. ENTERED AS SECOND CLASS MATTER, JANUARY 1, 1928 AT THE POST OFFICE. AT PITTSFIELD, MASS., UNDER THE ACT OF MARCH 3, 1879.

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More Pfaudler glass lined Steel Process Equipment is in use to-day than ever before in our experience—and this goes back 42 years.

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Process involves (describe).....

.....

Individual.....

Company.....

Address.....

City.....State.....

DM-11-30

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Buyers' Guide

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ALCOHOLS

American Commercial Alcohol Corp.
Pennsylvania Sugar Co
The Rossville Com. Alcohol Corp.
Stanco Distributors, Inc.
U. S. Industrial Alcohol Co.

AROMATIC CHEMICALS

Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Givaudan Delawanna, Inc.
Magnus, Mabee & Reynard Inc.
Newport Chemical Works, Inc.
Schering Corporation
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

BEESWAX

Theodor Leonhard Wax Co., Inc.
Will & Baumer Candle Co., Inc.

BIOLOGICAL CHEMICALS

Wilson Laboratories

BORAX

American Potash & Chemical Corp.
Pacific Coast Borax Co.

CHALK, PRECIPITATED

H. J. Baker & Bro.
Industrial Chemical Sales Co., Inc.
John & E. Sturge, Ltd.

COD LIVER OIL

H. J. Baker & Bro.
P. R. Dreyer Inc.
Norwegian Cod Liver Oil Association

CRUDE DRUGS

Compagnie Nationale Des Aliments Naturels
J. L. Hopkins & Co.
McIlvaine Brothers, Inc.
S. B. Penick & Company

ESSENTIAL OILS

W. J. Bush & Co., Inc.
California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Newport Chemical Works, Inc.
Plaimar, Ltd.
A. M. Todd Co.
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

FLAVORING MATERIALS

California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Magnus, Mabee & Reynard, Inc.
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

GELATINES

Coignet Gelatines

GLYCERIN

H. J. Baker & Bro.
Colgate-Palmolive-Peet Co
Harshaw Chemical Co.
Will & Baumer Candle Co., Inc.

MEDICINAL CHEMICALS

Abbott Laboratories
J. T. Baker Chemical Co
Chas. Cooper & Co.
Dow Chemical Co.
R. W. Greeff & Co.
Harshaw Chemical Co.
Heyden Chemical Corp.
Hoffmann-LaRoche, Inc.
Mallinckrodt Chemical Works
Merck & Co., Inc.
Monsanto Chemical Works
Newport Chemical Works, Inc.
N. Y. Quinine & Chemical Works, Inc.
Chas. Pfizer & Co., Inc.
Schering Corporation
Wilckes-Martin-Wilckes Co.

MINERAL OIL

M. W. Parsons Imports
Schliemann Companies, Inc.

SOAPS

J. L. Hopkins & Co.
John Powell & Co., Inc.

VANILLIN

Fritzsche Bros., Inc.
Givaudan Delawanna Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Works

CONTAINERS

ADHESIVES

Nat'l. Adhesives Corp.

BOTTLES

Carr-Lowrey Glass Co.
Owens-Illinois Glass Co.

BOXES (Corrugated)

Container Corp. of America
Hinde & Dauch Paper Co.

CANS

American Can Co.

COLLAPSIBLE TUBES

Aluminum Co. of America
Art Tube Co.
Bond Mfg. Corporation
New England Collapsible Tube Co.
Sun Tube Corp.
White Metal Mfg. Co.
A. H. Wirz, Inc.

CLOSURES

CORKS

Armstrong Cork Co.

INSIDE THREAD CAPS

Spring Stopper Co.

LINERS

Bond Mfg. Corp.
General Felt Products, Inc.

METAL CAPS

Aluminum Co. of America
Anchor Cap & Closure Corp.
Crown Cork & Seal Co.
Ferd. Gutmann & Co.
Phoenix Hermetic Co.
Williams Sealing Corp.

MACHINERY & EQUIPMENT

FILLING MACHINES

Alsop Engineering Co.
Arthur Colton Co.
Horix Manufacturing Co.
The Karl Kiefer Machine Co.
Scientific Filter Co.
F. J. Stokes Machine Co.
Stokes & Smith Co.

MIXING EQUIPMENT

Alsop Engineering Co.
Arthur Colton Co.
Scientific Filter Co.
F. J. Stokes Machine Co.

PACKING & CARTONING

Package Machinery Co.
Stokes & Smith Co.

LABELING EQUIPMENT

Economic Machinery Co.

PHARMACEUTICAL MACHINERY

Arthur Colton Co.
Pfaudler Co.
Scientific Filter Co.
F. J. Stokes Machine Co.

A portion of Dept. 2 devoted to filling, labeling and wrapping small packages

CORRECT methods of manufacture and vigilance are necessities in the maintenance of the best standards of MM&R products. Susceptibility to chemical and physical changes, contact with air and light, renders the process of their production and preparation for market a procedure that belongs to the specialist.

The MM&R organization, built up during 35 years of uninterrupted progress, specializes in the manufacture and importation of Essential Oils, Refined Balsams, Infused Oils, Paragon Olive Oil and Basic Flavoring Materials in all size packages.

MAGNUS, MABEE & REYNARD, Inc.
Main Offices: 32 Cliff Street
NEW YORK

Established 1895

MM&R ESSENTIAL OILS

CONVENIENCE and PROTECTION for **TOILETRIES** ASSURED by **THE ANCHOR AMERSEAL CAP**

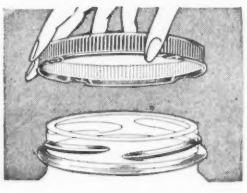
IT'S true that women demand quality in toilet products . . . But today they demand that quality *plus* an attractive and convenient-to-use package. And in producing that sales-creating type of package, the right closure is all-important.

Packages for lotions and creams—all products that are used often a little at a time—must be easy to open. They must also be easily and efficiently re-closed to guard fine qualities. For this double reason, the ANCHOR AMERSEAL CAP has become the natural choice of experienced manufacturers in this field.

When packed under ANCHOR AMERSEAL CAPS toiletries cannot harden or evaporate . . . cannot lose their efficiency or their fragrance. Since there are no threads to gum, cement, or freeze to the container, they can be depended on not to stick and so create ill-will for package and product. In the factory, ANCHOR AMERSEAL CAPS quickly prove their outstanding values. They can be applied by hand or machine—three or four times as fast as other types of closure. They will stand the roughest sort of handling in shipment—can be depended upon not to leak when carried by a woman in her travelling bag . . . highly important points to consider.

Let us tell you the whole story of the many advantages and economies of sealing your product with ANCHOR AMERSEAL CAPS. A few lines on your business letter-head will bring detailed information—promptly.

19,250,000 advertisements in The Saturday Evening Post and The Ladies' Home Journal are increasing the already great demand for products packed in glass under Anchor Amerseal Caps. Seal your products with Amerseals and get your share of this business. See our advertisements in The Saturday Evening Post and The Ladies' Home Journal.



A quarter turn to the right applies the Anchor Amerseal Cap. Lugs, formed to fit the contour of the glass threads, draw the cap down and effect a tight uniform contact around the complete top edge of the container finish.

Anchor Cap & Closure Corporation
LONG ISLAND CITY, NEW YORK • TORONTO, CANADA

E · S · C · S

EAST SOUTH CENTRAL STATES

Here in the very heart of the domain of King Cotton, an industrial giant is already disputing his supremacy. Great deposits of ores and potentially huge water power are at the command of industry. And serving this increasingly important territory are the two "American" Alcohol plants ... at Pekin, Illinois, to the north and Gretna, Louisiana, to the south.

"SEE AMERICAN FIRST"

Odorless, Colorless, "Everclear" Alcohol.

Where quality is your sales appeal, use "Everclear" Alcohol.

"Everclear" is produced in our grainfields plant. Perfect clearness and an absence of odor are the outward evidences of its purity.

Quality drugs . . . pure drugs . . . . require such raw materials as "Everclear."

ALCOHOL EVERCLEAR ALCOHOL

Reg. U. S. Pat. Off.

Solvents and Plasticizers manufactured by the
KESSLER CHEMICAL CORPORATION
a subsidiary of
AMERICAN COMMERCIAL ALCOHOL CORPORATION

Ethyl Acetate	Butyl Stearate
Butyl Acetate, Nor. and Sec.	Refined Fusel Oil
Amyl Acetate	Dimethyl Phthalate
Amyl Propionate	Diethyl Phthalate
Butyl Propionate	Diamyl Phthalate
Butyl Butyrate	Dibutyl Phthalate
Ethyl Lactate	Dibutyl Tartrate
Butyl Alcohol, Sec.	Triacetine
Amyl Alcohol	Special Solvents and Plasticizers

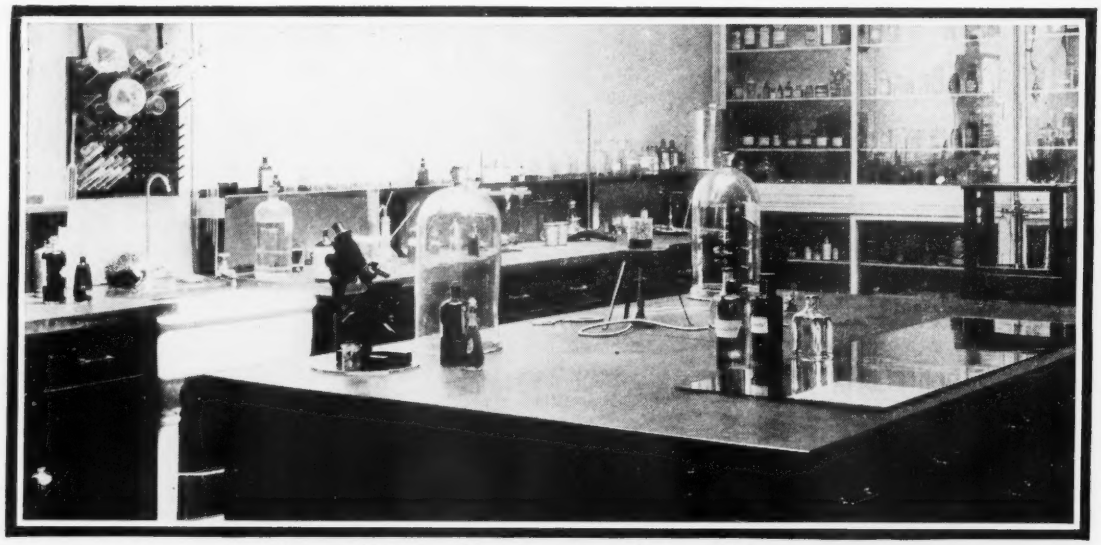
AMERICAN COMMERCIAL ALCOHOL CORPORATION

420 Lexington Avenue, New York, N. Y.

PLANTS:

Pekin, Ill. — Philadelphia, Pa.

Gretna, La. — Sausalito, Cal.



A corner of the Owens-Illinois New Uses and Research Laboratory

Using the microscope to increase your profits

Somewhere in your operations there may be hidden profits —profits which cannot be seen unless your questions are studied from an outside viewpoint. Owens-Illinois, through its New Uses and Research Division, offers you the services of an outside viewpoint, but one which is thoroughly familiar with the practical considerations of your own business. ¶ Those who take advantage of Owens-Illinois research are definitely assured of absolutely confidential treatment of the questions and problems under consideration. The laboratory, in this respect, operates under exactly the same professional ethics which would prevail in the case of an independent research laboratory which you might retain to assist you in your business. ¶ The services of our research personnel are at your disposal to help in the solution of your problems.

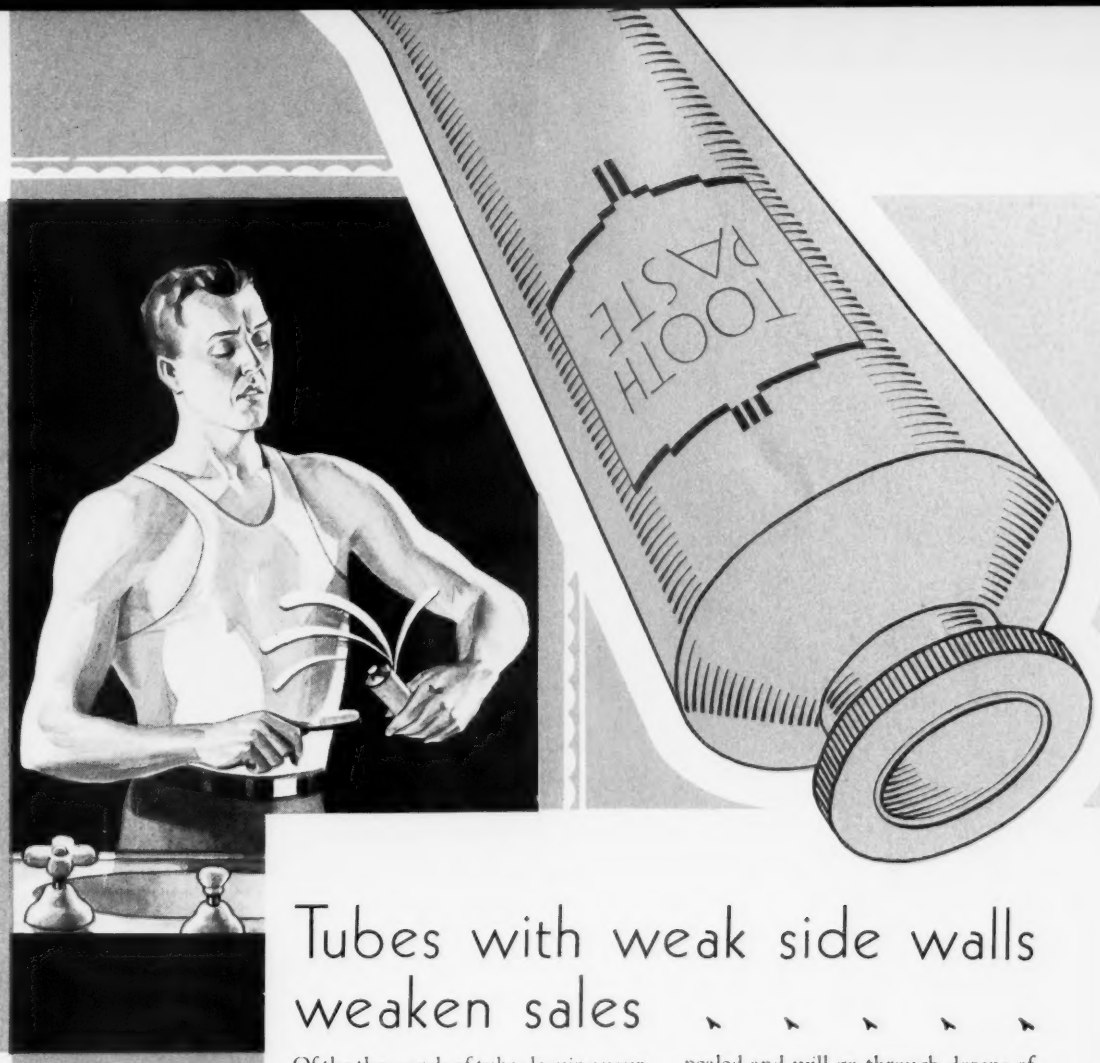
OWENS-ILLINOIS GLASS COMPANY, TOLEDO, OHIO

With his scientific training and specialized apparatus, the research worker can often find profits in your business which you would never notice yourself.

We have prepared an interesting booklet about Owens-Illinois research facilities. It is called "Using the Microscope to Increase Your Profits". May we send you a copy?

OWENS-ILLINOIS

BOTTLES



Tubes with weak side walls weaken sales

Of the thousands of tubes leaving your factory today, how many will live their useful life unpunctured and undamaged?

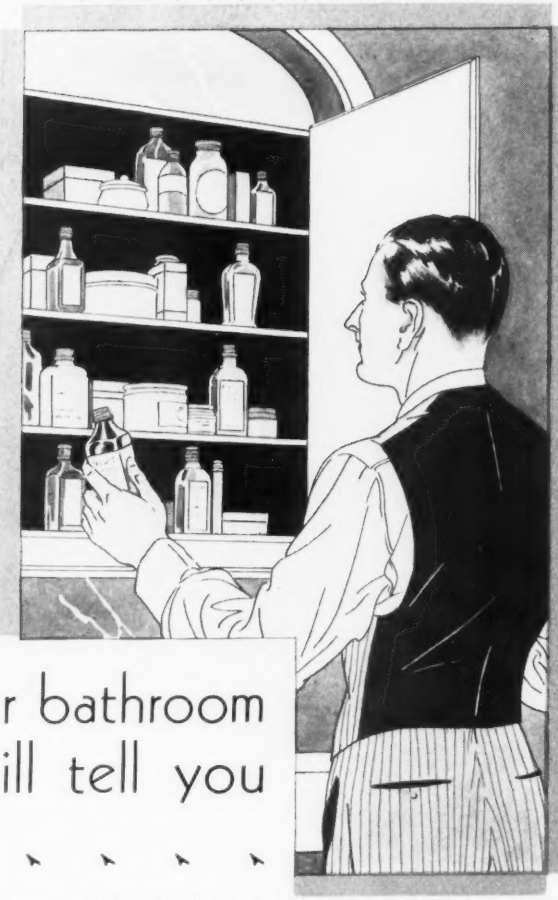
You can't afford to run the risk of weak-walled tubes. Because, from the consumer's viewpoint, the tube is part of *your* product. Weak-walled tubes weaken sales. Strong tubes strengthen them.

Though soft and pliable, due to the annealing, Collapsible Tubes of Alcoa Aluminum have greater tensile strength than those made of other metals. They will stand more pressure from either inside or out. In fact, many products can be packed in these tubes without clips. In addition, the caps are sturdy—rigid. They are unannealed and will go through dozens of falls to tile floors without flattening or thread stripping.

Many manufacturers tell us they have speeded production by using Collapsible Tubes of Alcoa Aluminum. Using them they do not need to use clips, and thus the tubes are filled faster. Also, the light weight of aluminum permits tubes to be packed in larger quantities—speeding unloading and handling in the plant.

These tubes take any kind of decoration and hold it. They are individually sterilized. Our nearest office will gladly supply you with complete information. Address ALUMINUM COMPANY *of* AMERICA; 2459 Oliver Building, PITTSBURGH, PENNSYLVANIA.

COLLAPSIBLE TUBES OF
ALCOA ALUMINUM



The bottles in your bathroom medicine chest will tell you a lot about caps

Tonight, when you go home, take a look at the caps on the bottles and jars in your medicine chest. Try them. See which ones come off easily and go back on just as easily.

As you make this simple test, you will instantly form likes and dislikes. Don't forget that the caps on your product go through this same test in every home they enter. People are finding out that some products are fitted with convenient caps. Some are not. And these people—your customers and prospects—are more and more buying lotions—hair tonics—mouth washes—toilet waters that have R-O Seal convenience. With a twist of the wrist these seals come off—go back on.

That important function, proper seating of the sealing medium on the sealing surface, is accomplished by the R-O Seal in a most ideal manner.

Because the seal is applied unthreaded, the exactly correct amount of vertical, stationary top pressure is easily applied with minimum bottle breakage. Then with the sealing medium held under this constant pressure, the threads are rolled into the cap, tailored to fit the threads on the bottle. Thus the proper sealing pressure is maintained until the cap is removed by the ultimate consumer. This ideal sealing operation is accomplished at almost any desired speed.

R-O Seals are supplied in any solid color, lacquered, enamelled, or lithographed, and in a wide variety of sizes. Our nearest office will gladly give full particulars. ALUMINUM COMPANY *of* AMERICA; 2459 Oliver Building, PITTSBURGH, PENNSYLVANIA

ALCOA ALUMINUM

"ROLLED ON" SEALS OF
ALCOA ALUMINUM

COLLAPSIBLE
TUBES
SPRINKLER
TOPS
WHITE METAL MANUFACTURING CO.
HOBOKEN - NEW JERSEY

AN AID TO SUCCESSFUL MARKETING

Crown Screw Caps are a factor in the successful marketing of this popular toilet accessory. Easy to open, convenient to re-close, they save time and temper---build good will.

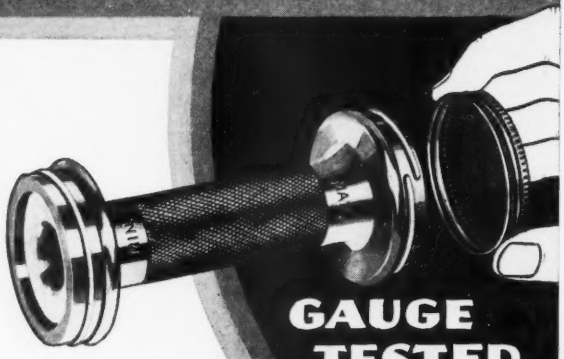
WINNING the consumer's confidence—depends today on the package as well as on the product. Experienced merchandisers have learned that the package is not merely the container. It is in reality the container plus the closure.

Crown Screw Caps are playing an important part in the successful marketing of many meritorious products because of their uniform and dependable sealing efficiency. Made to «gauge tested» accuracy, Crown Screw Caps always provide perfect protection for your product and build valuable good will among consumers by their unfailing ease in opening and reclosing.

Why not make sure of the friendliness and good will of those who buy your product by providing your packages with Crown Screw Caps? Write today for samples and complete information.

CROWN SCREW CAPS

The "gauge tested" accuracy of Crown Screw Caps safeguards your product against deterioration, loss of strength, leakage, spoilage. It is also an element of satisfaction to the consumer because the unvarying accuracy of Crown Screw Caps makes them easy to remove and replace. Our research department is prepared to develop liners to meet the particular requirements of any product and you are invited to make full use of these facilities.



GAUGE TESTED THEY FIT

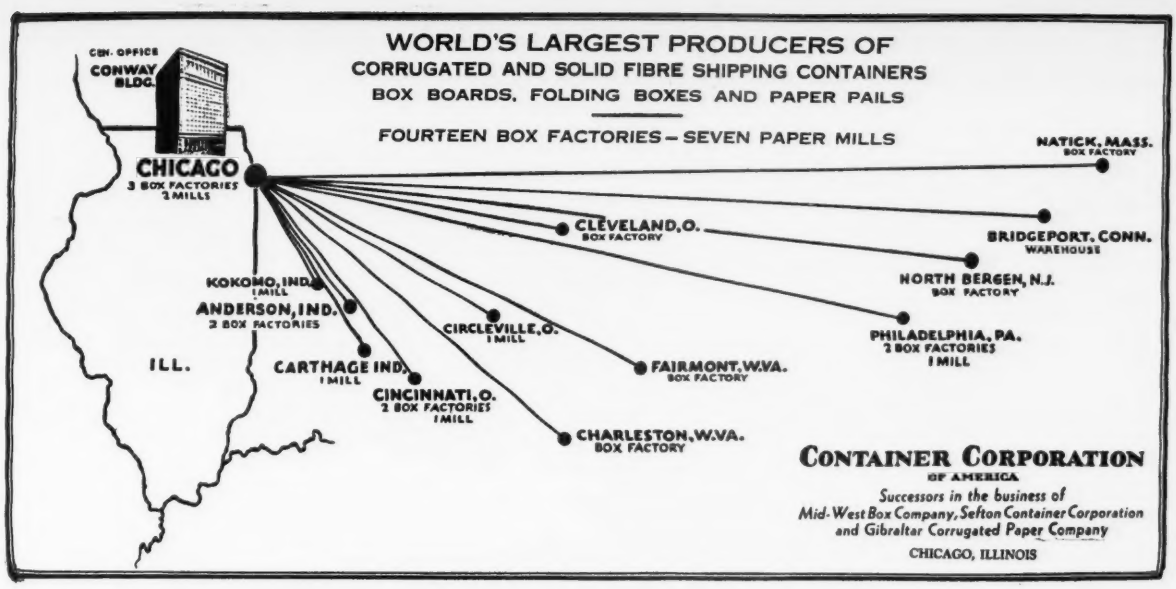
PERFECT SEALING

Crown Cork & Seal Co.

Baltimore • Maryland

Makers of the Crown

(THE FAMOUS CLOSURE FOR WIDE MOUTH GLASS)



Our Progress is the Gain of Our Customers

The growth of the Container Corporation of America is a notable one in these times of stress. Its progress is a tribute to sound management and dependable, high quality products which have secured the confidence and support of many of the Nation's biggest buyers and shippers as well as a host of manufacturers with smaller, but nevertheless important, requirements.

With the acquisition of the Sefton Container Corporation in the early part of the year, our line of quality Corrugated and Solid Fibre Shipping containers and Box Boards was supplemented by a fine line of Folding Boxes and Paper Pails, well known and popular with the trade. Recently another plant, the Gibraltar Corrugated Paper Company, was secured, resulting in an unequalled manufacturing set-up of mills and box factories in strategic locations which insures superior service to customers.

Reduce your shipping costs by using better shipping boxes.

Again, our new contribution to the corrugated field—MYRACOL—which enables buyers to secure corrugated boxes in all the colors of the rainbow, at a very slight increase in cost, further indicates progress in research that is outstanding in the field. We are happy to be able to fill the long felt want of shippers for a package in colors that not only gives their goods big publicity but also brings home the name and trade-mark of the maker to the consumer. Here's your big chance to come before the public with a real advertising package.

Write us for complete information on your requirements for any one of our many products. On request our box engineers will call to help solve some intricate packing problem. No obligation. In regard to MYRACOL colored boxes—write in direct care of General Sales, Chicago.

CONTAINER CORPORATION OF AMERICA

Mid-West Box Company Sefton Container Corporation

Seven Mills • Fifteen Factories
Capacity • 1300 Tons Per Day

General Offices **• Conway Bldg.**
111 W. Washington St., CHICAGO

DEPENDABLY UNIFORM . . . .

Armstrong's Corks insure smooth running production and safely sealed bottles . . .

BY hand or by machine, you can seal your bottles with uniform accuracy using Armstrong's Corks. Complaints from your production men and reports of "leakers" in shipment will be rare indeed. The cut and taper of every Armstrong's Cork is accurate and the grade standards never change.

Only clean, fresh corkwood, the kind that makes strong, lively seals, is used in the making of Armstrong's Corks. Polishing, bleaching, sterilizing, every process is painstakingly checked so that your production may be free from trouble and your shipments safely sealed.

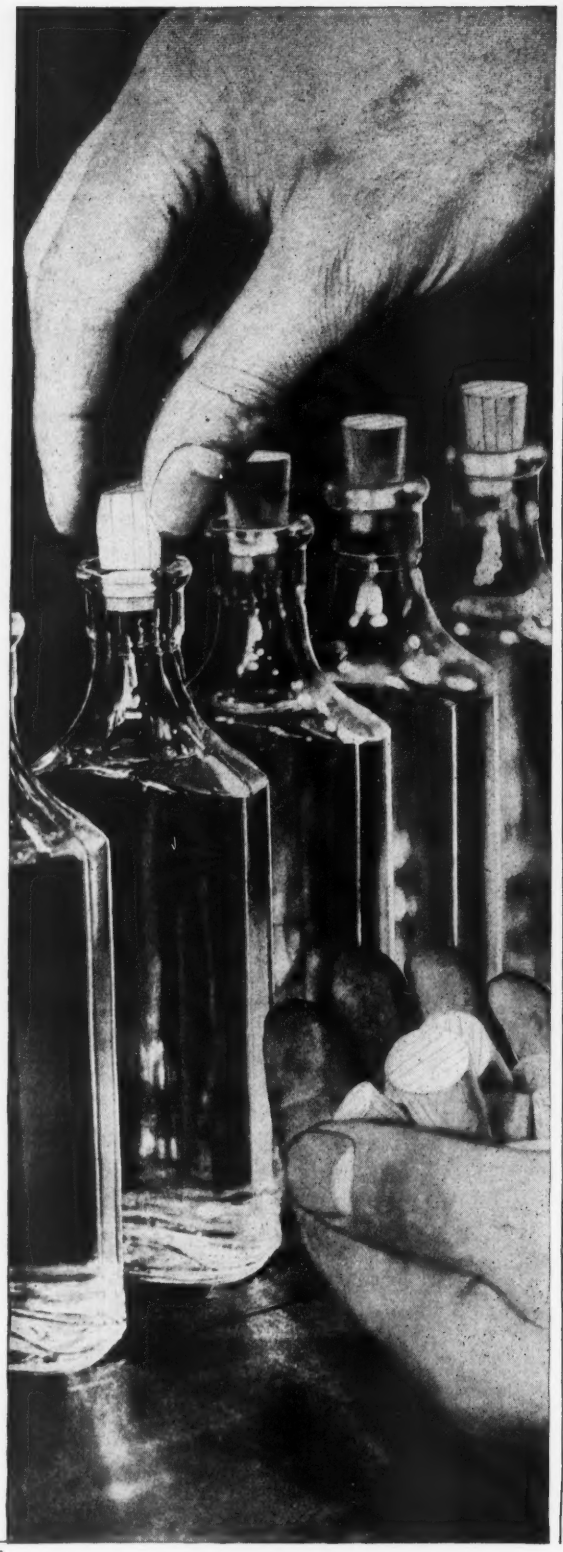
Experienced workers sort the corks, one by one, into grades that never change. The corks you buy are up to marked grade, and as strikingly uniform as human skill can make them.

Write for samples and prices of Armstrong's Corks in your required grade. Compare them with others for quality and accuracy of sorting. Ask also about Armstrong's Embossed Top Corks and Armstrong's Artmold Caps designed exclusively for your package. Armstrong Cork Company, 913 Arch Street, Lancaster, Pennsylvania.

OTHER ARMSTRONG CLOSURES:

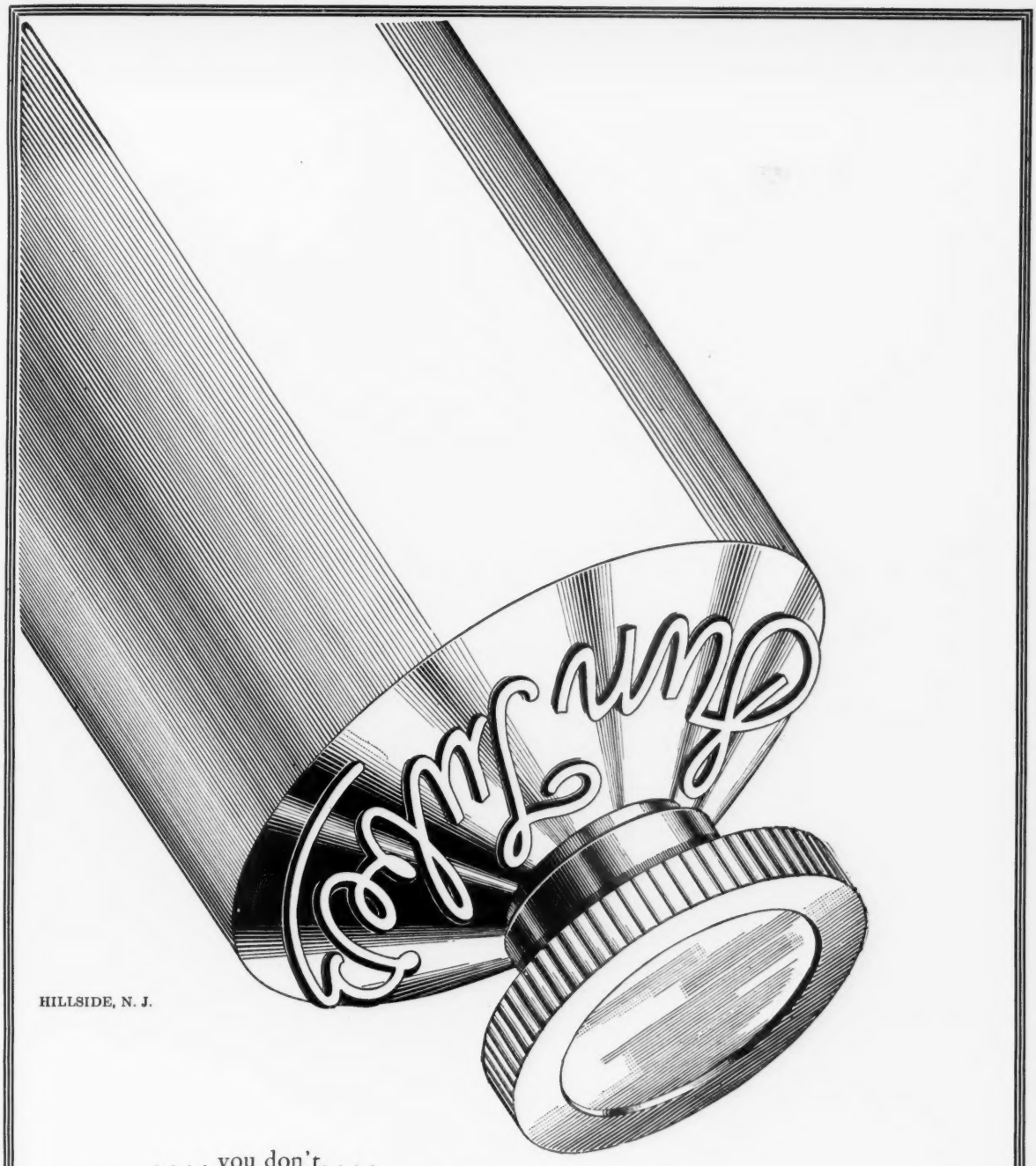
Armstrong's Embossed Top Corks · · · Armstrong's Artmold Caps · · · Armstrong's Round Top Corks · · · Armstrong's Wedge Top Corks · · · Armstrong's Rubber Stoppers · · · Armstrong's Flange Corks · · · Armstrong's Crowns.

Full information on request.



Armstrong's Corks

A grade for every need . . . every sack guaranteed



HILLSIDE, N. J.

, . . . you don't, . . .
have to be in the social register
to buy *Gum Tubes*.

, . . . you are required, however, . . .
to have a product befitting this unusual
tin tube.

Frank J. Prince
Pres.

P. S. , . . . warming up, . . . for another
three shift year.

The PHOENIX FLAME is a little magazine of good fellowship published particularly for packers of foods and manufacturers of pharmaceuticals, proprietary remedies, toilet preparations and chemicals.

Fifteen Minutes a Month

BOOKS . . . BOOKS . . . BOOKS . . . the libraries of the world are filled to overflowing. Each month brings a new assortment of magazines to the corner newsstand. And, each morning (or evening) a voluminous newspaper is dropped at your door.

A thousand men in a thousand lifetimes could never read this vast accumulation of words. What is the busy man to do who would know of the past, who would keep informed of the present, who would seek to peer into the future?

Several educators and publishers have attempted an answer. Dr. (Five-Foot Shelf) Eliot has assembled into one convenient set the writings of the past which have everlasting value. Following the same principle, the editors of "The Reader's Digest" select the best magazine articles and publish them in compact monthly form. While several newsmagazines compress into abbreviated weekly units the vast news of the day.

The PHOENIX FLAME does not attempt to compete with these publications. But it draws freely upon them all — classics, magazines, newspapers, technical journals, *et.al.* And, then adds a few observations of its own which it publishes in brief, readable form.

It doesn't take fifteen minutes a day, or fifteen minutes a week to read *The* PHOENIX FLAME, but merely *fifteen minutes a month.* If you only find one bit of interesting information, one helpful suggestion, or one smile in each issue, you'll be repaid for your time.

PHOENIX *Metal Caps*

(for Glass Packages)

The PHOENIX FLAME is sent free to manufacturers and packers now using or contemplating the use of glass containers and metal caps. If you are not receiving this friendly little publication each month, fill in, clip and mail attached coupon.

PHOENIX-HERMETIC COMPANY, 2444 West Sixteenth Street, CHICAGO
Place my name on your mailing list to receive future issues of *The* PHOENIX FLAME:

Company _____

Individual _____ *Position* _____

Street, City and State _____

Products Packed _____

MASCULINE STRENGTH OF APPEAL

THE SELLING POWER OF COLOR AND DESIGN

. . gains ever-increasing recognition as a merchandising factor. More than merely striking, a handsome tube of forceful design and appealing colors definitely expresses PRIDE OF CONTENTS . . . which, in turn, imparts immediate and lasting confidence in the product itself. And...New England Collapsible Tubes are as good as they look! Quality materials and quality manufacture are synonymous with the name "New England."

NEW ENGLAND COLLAPSIBLE TUBE COMPANY

17-35 Waller St., New London, Conn.
3132-34 S. Canal St., Chicago, Ill.
New York Office: 370 Lexington Ave., (Cor. 41st St.)

NEW ENGLAND COLLAPSIBLE TUBES

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Nov. 1930

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Improved methods of manufacture have enabled us to materially reduce the cost of Phenobarbital and Phenobarbital Sodium.

Write for prices on quantity lots or on contract.

The hypnotic and sedative action of phenobarbital or phenobarbital sodium, is increased over that of barbital by the introduction of the phenyl group. It possesses several distinct advantages:

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MALLINCKRODT CHEMICAL WORKS.

Drug Markets

Vol. XXVII NOVEMBER 1930 No. 5

Capper-Kelly Facts

THAT the Capper-Kelly bill should be defeated for the reason that it will not accomplish what its sponsors want it to accomplish was indicated quite clearly in the article "Capper-Kelly and Company" published in the October issue. This article presented sound arguments indicating that even though the bill might be legally sound and be adopted by every manufacturer, it might work definitely to the advantage of the chain store groups and build them up still further at the expense of the independent retailers and wholesalers, as well as at the expense of the manufacturers.

Now along comes Charles Wesley Dunn, counsel for the Associated Grocery Manufacturers of America, as well as counsel for the American Pharmaceutical Manufacturers Association, who recently addressed the grocery manufacturers' association on the legal aspects of the proposed bill. And Mr. Dunn—who is seldom if ever wrong on his legal deductions—indicates in a manner that the lay mind can readily grasp why the bill as it is drafted is so full of loop-holes that it can not possibly bring about the state of conditions that the trade anticipates. No control in intrastate commerce, but only in interstate commerce is only one of the reasons why the bill will not make resale contracts effective. Others of equal importance are stressed by Mr. Dunn as making the passage of the bill highly undesirable.

WHILE Mr. Dunn stated clearly in his introductory remarks that he was presenting his own views and not those of the association which he advises, there can be no question of his statements having a marked effect upon the members of an association that thus far has taken no definite stand for or against the bill.

WE FIRMLY believe that it is about time that various manufacturers and associations in the drug trade ceased to "follow the leader" by endorsing the Capper-Kelly bill without giving the matter serious thought. It is about time that the evils of this type of legislation, as well as the weaknesses of the particular measure in question, were recognized by the manufacturers—who after all must be the leaders rather than be those who are led.

Caution Needed The feeling of confidence that has returned to the faces of service wholesale members of the National Wholesale Druggists' Association has behind it a great deal of history written in a comparatively short space of time. For it is only within the last few years that the organization itself—as well as its individual members—has been shaken to its very foundations. That many of these wholesalers wondered if they could possibly remain in business in the face of threatening conditions was made clear by the ease with which mergers of these members themselves were accomplished. Now the storm has passed, the future appears bright and secure.

For these wholesalers, however, there is the likelihood of danger. The period of uncertainty and impending disaster seemed long while it was passing, but how short it appears in retrospect. How easy it is to convince oneself that there never was any real danger—that it was only imaginary. Wholesalers always have been and always will be, so why worry?

The future appears bright for the wholesalers only because they have been forced to realize that they have no divine right to performing the wholesale function in any given territory. They have been taught during the past few years that the function is necessary but that it will be performed by those who can and will perform it in the most efficient and economical manner. If these same wholesalers are to forget this basically sound principle and are to be lulled into smug complacency by the clearing of the storm clouds, they may well expect to again run into disaster.

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There seems to be confusion about just how the ethical merchandising of tooth pastes will be handled by the American Dental Association. The American Medical Association either cannot answer this, or there is some misunderstanding on the part of Colgate or the A. D. A. The fact is that Colgate's Dental Cream has been accepted by the Council of the A. D. A. The Journal of the A. M. A. publishes a long editorial on the subject stating "the council on dental therapeutics of the American Dental Association has, it is reported, secured the promise of abandonment of the claims for low surface tension by the Colgate Company . . . " But shortly after this time the same pictures and the same statements regarding surface tension appeared in a Colgate advertisement in a New York daily.

Respect for Rights That the Food and Drug Administration has gone beyond the power given to it by the Food and Drug Act is clearly indicated in the Hartford, Conn., U. S. District Court decision which upholds not only the right of a manufacturer of a drug product to place upon his label the names of those diseases for which there is no recognized cure—but for the relief of which the medicine in question is efficacious—but also upholds the right of a manufacturer to use a therapeutically suggestive name for his product.

The decision of the court is so clear cut and so fairly based upon a proper interpretation of the law in accordance with the facts that it should give new hope to a sorely tried industry almost afraid that its rights could never again be maintained against a moral issue stretched far beyond the spirit of the law. The decision should give to the industry a feeling of security in the court room and should lead other manufacturers to defend their rights rather than meekly to subject to the will of those who would have only the physician permit anyone to buy products efficacious for common ailments, and more than half the time not telling the patient what the product is but carefully concealing the fact in an artfully masked prescription.

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Misleading Indications Despite the continuance of optimistic reports regarding a revival in the general business situation, stock quotations continue to shrink in value. And due to the fact that ever so many people own stocks and are more influenced by the shrinkage of their holdings than they are by the apparently sound arguments of the optimists, the general opinion continues that the time for business revival has not yet arrived.

But those studying the situation should look to the real cause of a large part of the recent deflation in stock values—a deflation that caused long established stock brokerage houses to totter on the brink or to fall altogether. The fact of the matter is that these houses themselves are now having their accounts put in order. In some cases this means the raising of enormous amounts of capital to add to their shrunken security at the bank. The brokerage houses are largely being brought under the microscope of exchange officials and are going through just the experiences that many holders of stock on margin went through in the period since October 1929.

A Change Ahead Raw materials and containers continue to be available to manufacturers at prices which in many instances are at or below the cost of production. Such conditions can not be regarded as permanent, and manufacturers will do well to more closely study the sources of supply on those items which enter largely into their costs. Only by being acquainted with the conditions surrounding the supply industries can manufacturers project their cost very far in the future and only by knowing what the goods are going to cost when orders arrive can manufacturers be sure of their ground.

Particularly disastrous to a manufacturer would be the basing of selling price on the costs as indicated to-day. For in such an instance the manufacturer's profit would largely consist of the amount of money that producers of glass bottles, cardboard boxes, essential oils, crude drugs, and other items will take from the manufacturer when their respective businesses return to a normal sound condition.

The supply industries can not continue long to run without a proper return on the money invested and indications are that definite steps will soon be taken in at least some of these industries to bring a change.

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Snap and Vigor Despite the fact that practically every line of business has felt the effects of the economic depression, the drug manufacturing industry has lost none of its snap and vigor. While this industry has suffered far less than many other industries, the action of manufacturers in attempting to maintain or surpass their previous volume of sales is remarkable. And more remarkable is the fact that a large number of drug manufacturing concerns are showing profits close to or greater than the profits of 1929.

Apparently the general slump has no other effect upon the drug industry than to spur its intelligent and agressive executives to greater effort. General improvement in products available for treatment of many conditions continues; improvement in packages, advertising copy and other aids to more complete and effective distribution continues also. There will be no large decline in the portion of the consumer's dollar that is spent for drug products if the drug industry can prevent it, and it seems quite likely that the actions of aggressive manufacturers will largely prevent such a decline.

More Cod Liver Oil While druggists are groaning under the multitude of various brands, strengths and flavors of cod liver oil preparations that they now must carry in stock, the future promises nothing for them but a still greater increase. Following the response of the medical profession to Viosterol and the consequent appreciation that the lack of vitamin A in the product is a serious handicap, manufacturers are trending strongly toward production of cod liver oil concentrates.

Within the coming month two new concentrates will make their appearance, one by Squibb and one by McKesson. Added to the recent appearance of White's, I. V. C. and the new McCoy's, it seems that the public will soon become concentrate conscious and demand that the druggist stock their choice.

While confusion might result in the public for a time and while druggists will have difficulty in carrying proper stocks of those items that will have the most demand, one thing seems certain: more cod liver oil products will be consumed by the public during future months than has been consumed even in the recent past. The sales stimulation that competition among the various manufacturers will produce, guarantees at least that one result.

Ten Years Ago

From our pages November, 1920

American Pharmaceutical Association announce the election of the following officers for the ensuing year: President, Samuel L. Hilton, Washington, D. C.; 1st vice-president, Charles E. Caspari, St. Louis; 2nd vice-president, David F. Jones, Watertown, S. D.; 3rd vice-president, Hugo H. Schaefer, New York

Scott & Bowne, 60 Orange st., Bloomfield, N. J., manufacturers of cod liver oil preparations have perfected plans for an addition to their plant.

Parke, Davis & Co., Detroit, Mich., have completed plans for the erection of an addition to the plant at Quinn and McDougall avenues.

J. L. Hopkins, president of J. L. Hopkins & Co., has been reelected treasurer of the New York Board of Trade and Transportation.

The Swan-Myers Co., Indianapolis, Ind., manufacturer of pharmaceutical and biological products, is having plans prepared for the erection of a plant on Senate ave., estimated to cost $100,000. Rolley M. Cain is president of the company.

Antoine Chiris Co. has purchased a plot of land at Delawanna, N. J., from Frank R. Allen, Elva B. Allen, David R. Smith and Adda W. Smith, for $32,000. It is reported that the land is wanted for extension of the company's plant.

THE package part of the story . . .

A good product and an outstanding package usually go hand in hand. Building successful packages for customers, counseling with them on design and color, these are jobs the American Can Company is doing constantly for hundreds of manufacturers large and small. The experience, the personnel, equipment and practical knowledge are here to do an outstanding job for you. You will find in Canco packages and services the key to a mutually profitable relationship—and packages that really sell goods.

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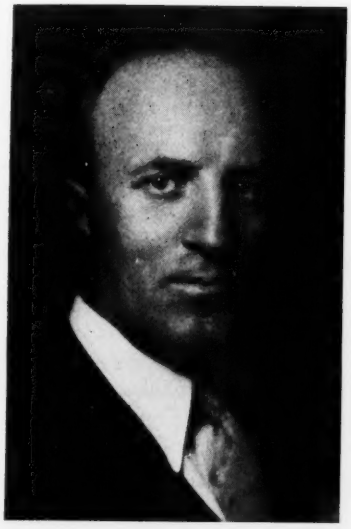
Why the Capper-Kelly Bill Should Not Pass



Addressing the Associated Grocery Manufacturers of America, Charles Wesley Dunn, counsel to that association as well as to the American Pharmaceutical Manufacturers' Association, clearly indicates the Capper-Kelly bill's limitations that will cause it completely to fail of its purpose. After reading Mr. Dunn's expose, an era of uncertainty is the least that can be expected following the passage of this bill.

THE title of the Capper-Kelly bill reads: "A Bill to protect trade-mark owners, distributors and the public against injurious and uneconomic practices in the distribution of articles of standard quality under a distinguishing trade-mark, brand, or name." This title is inaccurate in two respects. In the first place it represents that the bill deals only with articles of standard quality. The fact is that it applies to all articles of commerce which bear the stated mark, brand or name, whether they are of standard quality or not. In the second place it represents that the bill runs in favor of all trade-mark owners and applies to articles bearing the mark, brand or name of anyone. The fact is that it applies only to articles bearing the mark, brand or name of the producer.

The bill contains 4 short sections.
Section 1 proposes the substantive law to be enacted; Sections 2 and 3 limit its application; and Section 4 establishes definitions.

Section 1 broadly declares "that no contract relating to the sale of a commodity which bears (or the label or container of which bears) the trade-mark, brand or trade name of the producer of such commodity, and which is in fair and open competition with commodities of the same general class produced by others, shall be deemed to be unlawful, as against the public policy of the United States or in restraint of interstate or foreign commerce or in violation of any statute of the United States, by reason of any agreement contained in such contract that the vendee will not resell such commodity except at the price stipulated by the vendor." The term "producer" is defined by Section 4 to mean grower, packer, maker, manufacturer, or publisher; the term "commodity" is defined to mean any subject of commerce.

In short, Section 1 validates a resale price contract, within the limitations stated; and upon its enactment the manufacturer will be free to make such a contract, whether oral or written, express or implied, formal or informal. No penalty is imposed for a violation of the contract. To enforce it the manufacturer would resort to the court, as in the case of any lawful contract. And he could insert a collectable penalty for its violation.

It is important to note the limitations of this proposed law. There is the limitation, first, that it is permissive in character. It merely validates a resale price contract; it does not require the use of such a contract. Hence if it is enacted a manufacturer will be free to make a resale price contract or not as he pleases.

There is the limitation, second, that the law will not apply to private brand merchandise or legalize a resale price contract with respect to it. This because it is confined to commodities bearing the producer's

mark, brand or name, and the term "producer" is not defined to include a dealer. Hence if this law, is enacted the dealer technically will remain subject to criminal prosecution under the Sherman Act for making such a contract with respect to the sale of his private brand merchandise in interstate commerce. This discrimination between a manufacturer and a dealer and their brands is difficult to understand and raises a constitutional question for affirmative answer, should such prosecution be instituted, which is then improbable. It is apparent that the retailer sponsors of the bill, who principally buy from the wholesaler, are not aware of this discrimination.

Only First Sale Price Fixed

There is the limitation, third, that the law will validate only a contract fixing the first resale price and will not validate one fixing a subsequent resale price. Hence it will not empower a manufacturer to make a resale price contract with a retailer to whom he does not sell. Neither will it empower him to make a contract with a wholesaler directed to fix the retail price. Both such contracts technically will remain illegal and subject to criminal prosecution under the Sherman Act. Why a manufacturer is permitted contractually to fix the immediate resale price and is not also permitted so to fix the secondary resale price is likewise difficult to understand and raises a constitutional question for affirmative answer upon such a prosecution, which is likewise improbable. It is apparent that the retailer sponsors of this bill, who principally buy from the wholesaler, are not aware of this distinction.

Only Interstate Commerce

There is the limitation, finally, that the law will validate no resale price contract unless it relates to interstate, as distinguished from intrastate commerce. Hence it will have no application if the manufacturer sells to a wholesaler or retailer exclusively in intrastate commerce, i.e., from local stock. It will only apply if he sells to the wholesaler or retailer from stock in another state. In view of the wholly permissive character of this bill and the fact that its retailer sponsors largely, if not principally buy in intrastate commerce, they are hardly justified in assuming or asserting that its enactment will settle the problem of retail price cutting.

Having defined the law proposed by Section 1 we will now examine the limitations placed upon it by Sections 2 and 3.

Section 3 requires scant notice. It merely provides that the law shall not be construed to legalize a price agreement between producers or wholesalers or retailers. This is but a precautionary disclaimer directed to make it clear that the law does not validate a price agreement between competitors.

Section 2, however, requires careful notice. It first provides that any resale price agreement validated by Section 1 shall be deemed to contain the implied condition "that during the life of such agreement all purchasers from the vendor for resale at retail in the same city or town where the vendee is to resell the commodity shall be granted equal terms as to purchase and resale prices." The meaning of this obscurely drawn provision is clarified by application. Apparently it means that if a manufacturer makes a resale price contract with a dealer in a city or town and he sells to retailers therein he must (so long as the contract is effective) sell to them at the same price and upon an equal resale price basis. If he fails so to do the contract resumes its illegal character.

Wholesaler Would be Obstacle

But the purpose of this provision is not obscure. It is to compel the manufacturer (if he makes such a contract) to equalize the purchase and selling price of the single retailer and the chain store. That the provision would fail to realize its purpose is clear upon analysis. In the first place a manufacturer is under no obligation to make such a contract and if and to the extent he does not do so, the provision is inoperative. In the second place the provision is also inoperative if and to the extent the manufacturer either sells in intrastate commerce or sells to the wholesale trade. In the third place a manufacturer could not place himself under such a retail price obligation and successfully continue to sell non-service grocery retailers, principally the large chain stores. How inconsistent this provision is the following illustrations establish: it excludes a village for some unknown reason; it leaves the manufacturer who sells to the wholesaler free to fix a variable price to him and for his retailer customers to pay. And since most retailers buy from the wholesaler, one is at loss to understand why they think this provision will benefit them. Moreover it does not apply where the retailer buys private brand merchandise . If the provision could be effective one result would be to promote general direct buying. What do the wholesalers think of that ?

The basic criticism made of this provision, however, is not that it is ineffectual or inconsistent, but that it is offensive to good enocomics, destructive of the competitive principle, and contrary to sound public policy. This because it is directed to and, to the extent it is effective, will arbitrarily require price and resale price equality in the retail distribution of articles of daily consumption and use. The criticism is later considered in more detail.

Section 2 next provides that any resale price agreement validated by Section 1 is subject to the further implied condition that the vendee may resell at other than the agreed price to dispose of a damaged or deteriorated product (with notice of that fact) or to close out a stock for discontinuing a product or disposing of a surplus toward the end of a season, in case of a seasonable article. It also grants a similar price reduction privilege to a receiver in a bankruptcy sale, etc.

This provision is included, of course, to protect the dealer. It recognizes the principle that there are circumstances under which the dealer is economically justified in selling at other than the agreed price. It undertakes to define these circumstances. And the question is whether the definition is comprehensive, as it manifestly should be. The mere statement of the definition establishes that it is not. It is self-evident that these circumstances are many, varied and subject to constant change. No enumeration can be complete; any enumeration is certain to be found wanting. And the fact is that this provision would give the retail grocer little or no protection in the normal conduct of his business in packaged products not usually subject to deterioration. It is said that the solution of the problem is to provide in Section 1 that the contract is subject to immediate cancellation by the vendee, in his discretion. It is said that the solution is to add a comprehensive saving clause. It is said that such a clause would be one permitting the vendee to resell at other than the agreed price if he first offers the product back to the vendor at its cost price and the latter refuses or neglects to rebuy it. But whatever it may be there should be a due solution of the problem from the standpoint of both the dealer and the public. And if the bill is so modified there will be some who will ask: How valuable would such a contract be, in practice ?

Affects Necessities

It remains to examine the report of the House Committee on Interstate and Foreign Commerce and its arguments for the bill reported. Before doing so I wish to note two inaccurate statements by the committee. It states that the bill does not refer to necessities of life and therefore in no way affects the necessary cost of living. The fact is that it broadly applies to all commodities bearing the producer's mark, brand or name and this broad definition includes numerous necessities of life. For example, many foods and medicines are within the definition. Hence this law will affect the necessary cost of living, to the extent it is effectual. The committee further states that at the present time when a manufacturer knows that his goods may be subject to cutthroat competition in distribution he is obliged, in order to keep the trade of small dealers, to fix his range of prices so high that, if necessary, he can make a discount which will enable the small dealer to meet cutthroat prices. This is certainly not true of the drug or grocery manufacturer. Cutthroat price competition in drug or grocery distribution does not influence a higher price by him or special discounts to the small dealer. On the contrary its influence, if any, is toward a lower price by the manufacturer and a special discount to the large dealer.

The first committee argument for the bill is this: it will restore the common law liberty to make a resale price contract, denied by the Sherman Act as construed in the *Miles* case. This is a purely legal argument. It is sound if such a contract was valid at common law. But the Supreme Court held in the *Miles* case that it was not. And we must take our law from our highest court. Speaking for the court in said case, Justice Hughes said: "* * * it was concluded below that the (contract) restrictions sought to be enforced by the bill were invalid both *at common law* and under the act of Congress of July 2, 1890. *We think that the court was right.*" As authority for its contrary opinion the committee quotes from Mr. Beck's oral argument in the *Boston Store case*, in which he contended that such a contract was valid at common law and therefore does not offend the Sherman Act and upon this ground sought to reverse the *Miles* decision. That this authority is insufficient is indicated by the circumstance that, after listening to his argument, the court reaffirmed the *Miles* decision, saying: "there can be no doubt that the alleged price-fixing contract * * * was contrary to the general law and void." The general law is the Sherman Act and it was enacted to preserve the common law right of freedom to trade. But I should add, here, that I concur in Mr. Beck's contention. Resale price contracts of the kind have been sustained under the English common law; and, if I recall rightly, there is no recorded English common law case in which such a contract has been held invalid. This discussion, however, is academic in view of the *Miles* and *Boston Store* decisions. Moreover, as Justice Brandeis pointed out in the latter case, whether a manufacturer should be permitted contractually to fix a resale price for his product and, if so, under what conditions is an economic question, one for Congress to decide on that basis. It is because the settlement of this question has been sought in the court instead and the court was required to answer it upon technical legal grounds that the federal resale price law has come to its present state of economic contradiction. Consequently it will not do for the committee to base its support of the bill upon the restoration of a common law right denied by our highest court. It must rely upon an economic reason, which it does as we shall now see.

The second committee argument for the bill is this: it is hoped that such a law will be effective to prevent, to a great extent, the dealer practice of advertising and selling a manufacturer's popular specialty of known value at a cut price (e.g., at or below cost) in order to attract customers and to sell them other merchandise at an excessive price. This practice the committee denounces as cutthroat competition; as detrimental to the manufacturer, unfair to competing retailers and injurious to the purchasing public. It bases its denunciation upon the testimony adduced before it.

Hence the economic evil at the bottom of this bill which it is designed to remedy is not price cutting in resale, but *predatory* price cutting *which amounts to*

unfair competition. That is, price cutting in the distribution of identified merchandise which is done, not with a legitimate business purpose, but with a wrongful purpose unfairly realized to the detriment of others concerned. In defining this as the economic evil at which the bill is directed the committee is in accord with its retailer proponents, whose complaint is against predatory price cutting.

Predatory Price Cutting Objectionable

Now no one will be heard to defend predatory price cutting in its invidious trade meaning and which is, in fact, an unfair method of competition. Its definition precludes that. And no one can reasonably oppose a due remedial law against it. But, opponents say, the objection to this bill is that it does not propose a due remedial law of the kind. This because it is not limited to the evil against which it is directed. That is to say, it is not limited to permit action by the manufacturer in prevention of unfair price cutting alone in the resale of his identified article of merchandise; it also permits and even requires (as to certain retailers) action by him in prevention of any price reduction and in suppression of all price competition in the resale of his article. In proof of this broader application the opponents cite two facts, viz.: *first*, the bill permits the manufacturer contractually to fix one resale price for all direct buyers; *second*, the bill provides in effect that if a manufacturer makes a resale price contract with a dealer in a city or town and sells directly to retailers therein (as many manufacturers do) he must (during the life of the contract) sell to all such retailers at the same price and place them all upon the same resale basis. Such a broad law, they maintain, is unsound in principle, opposed to good economics, destructive of the competitive principle constructively conceived, and therefore not expressive of right public policy. They go on to say that the enactment of this bill will promote its broader use, since it will remove the legal excuse behind which many manufacturers now hide for failure to take resale price action demanded by dealers; since the retailer proponents of the bill make no secret of their intention to use it to compel or induce manufacturers to equalize their price competition, to the full extent they can do so. And, they add, however detrimental may be the abuse of resale price competition it does not justify the enactment of a broader law itself susceptible of an equal if not greater abuse.

In explanation of their opposition the opponents make these points; there is legitimate and illegitimate price cutting, economic and uneconomic price reduction in fact in distribution, between which it is essential in the public interest to distinguish in any such law, in order that the one may be preserved and only the other prevented; the bill itself recognizes this distinction in its title, wherein it is declared to be against "injurious and uneconomic practices" in distribution, and in Section 2, wherein it permits resale at other than the agreed price under stated conditions economically justifying it; all distribution is now in process of constructive economic evolution progressively working toward increased individual merchandising efficiency and economy, with some dealers inevitably more successful than others in this attainment (and notable examples are cited); a difference in method of operation resulting in a substantially lower cost warrants a proportionate resale price reduction and differential, as in the case of the non-service grocery store; as a matter of sound public policy no law should be enacted which permits, promotes or requires any arbitrary interference with the economic working and development of distribution, or which deprives the purchasing public of the resulting economic benefits.

Favors Different Legislation

Boiled down to its essence the opponents' contention is this: admitting the evil of predatory price cutting which constitutes an unfair method of competition and that due remedial legislation against it is justified the fact remains that such legislation can and should be strictly limited to this evil and its single prevention; a limited law is available, adequate and all that can be properly demanded or enacted in the circumstances; there is no need to run the public risk of a broader law and it is unsound in principle and policy. It seems to me that a candid consideration of this contention, reviewed in the light of whatever may be said in answer to it, leads to the conclusion that it is convincing. I say this as one who is personally disposed to favor the bill, if I could do so; as one who personally favors a due remedial law against this evil. The objection is purely formal. And I later indicate how it can be met to secure an even more effective law.

The bill is subject to further formal criticism. The criticism is that it fails to provide the comprehensive remedy against this evil, which is available and required in the circumstances. A comprehensive remedial law, it is said, (1) expressly outlaws predatory price cutting which constitutes an unfair method of competition, and empowers government action against it; (2) expressly authorizes injunctive relief from it, by the federal court; and (3) permits due trade action by the owner of a trade-mark or trade-brand or trade name to prevent it. The present bill, even if duly limited, is directed only to permit the last. In support of the criticism it is argued: the first and logical remedial step is to outlaw this unfair method, in order that it may have no legal standing, and unless this step is taken the remedy is bound to be incomplete and inadequate; so long as the *Miles* case stands the Federal Trade Commission is practically powerless to enforce the unfair competition law against this unfair method, since in that case our highest court held in effect that a dealer has the right to sell what he has

(Continued on page 488)

Harmonizing in Chicago

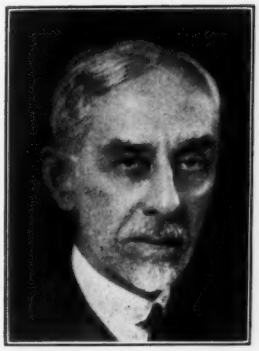
COMPLETELY gone from this year's annual meeting of the National Wholesale Druggists' Association was the atmosphere of apprehension of the future that was prominently displayed at the Atlanta convention of two years ago and that was present in a somewhat lessened degree last year at French Lick. There were present this year no doctors offering panaceas such as was offered by the late Robert R. Ellis a year ago. The fact that the McKesson members are now actively engaged in the work of the association and that they were present in large numbers with F. Donald Coster, their chief, and were apparently welcomed by the other members of the association, seemed to give to the entire membership the feeling that the N. W. D. A. was still the dominant factor in drug distribution.

The faces and general demeanor of practically all those present displayed an air of confidence of the future. For two years past other groups of distributing factors have seriously threatened to rise in importance in the field of drug distribution to the detriment of the so-called service wholesaler. Now the service wholesalers feel that they have sufficiently advanced in their attitude toward the changes that are taking place, to face with impunity any condition that might arise.

Any dampening effect that the general business depression might have had upon the attendance as well as upon the spirit of those present was more than offset by the conditions referred to. In fact the attendance established a record—being close to 700—and the spirit was one of marked enthusiasm. But the splendid co-operation and enthusiasm present in the meeting might not have been readily recognized by the casual visitor due to the fact that it resulted in an outward calm appearance to a meeting that for the last two years at least has been one of hectic running around and gathering in corners and in private rooms for secret discussions. The whispering conferences and the rumors attending the secret meetings of Atlanta having been relegated to the limbo of forgotten things, the outward rush and bustle that might easily be mistaken for constructive activity also were gone.

James M. Penland, President of Southwestern Drug Company, will guide the wholesalers during the coming year

H. G. Billmire, Humiston, Keeling & Company, the new first vice-president



Lee M. Hutchins, the retiring president of the association.

The attendance of manufacturers at the meeting was also greater than in recent years, and once again those manufacturers who attend not only to contact the wholesalers but also to contact other manufacturers who are segregated in various associations of manufacturers, were present. All associations into which manufacturers divide themselves according to the type of products manufactured or according to the manner employed for distributing their products were represented in large numbers. Suppliers of raw materials, chemicals and containers who sell both the manufacturers and the wholesalers attended in as large or greater numbers than in the past. From all appearances the meeting has lost none of its importance and continues to be the largest one of the manufacturing and wholesaling drug trade.

While very many McKesson members of the association were present, a final step toward the establishment of real co-operation between the McKesson houses and the other members—following the withdrawals of the resignations of these houses—was still necessary. This was the readjustment of dues so that firms with a large number of branch houses do not pay an exhorbitant amount of dues on the total volume of all their branches. As the constitution of the association formerly stood the dues of wholesale houses were placed at $150 for the first $1,000,000 in sales, with an additional $50 for each additional million dollars of sales. This remains the same with the exception that branch houses do not now have to become full members. Heretofore branch houses had to pay a minimum of $150 although two or three branches of one firm might only have done a total of $1,000,000 among them. This was obviously unequitable from the point of view of the larger houses such as McKesson. Also each of the branch houses had a full vote in the association thus giving one group too large a power in the affairs of the association. Now the member houses pay their dues on the volume of business done by their entire company with a flat payment of $50 each for everyone of their branches.

However, there is a provision made for subsidiary houses which are to become full members. A subsidiary house is defined as a house that is operated as a separate unit by its local executives. Thust he cost of membership of the McKesson houses is very materially reduced, at the same time as McKesson's influence from a voting standpoint is also very materially reduced.

The association continues to grow in size principally from the point of associate members. Two active wholesale members were taken into the association, both of the houses being former members who had resigned and now asked for reinstatement. They are:

Charles Leich & Company, Evansville, Ind.

Northern Drug Company, Duluth, Minn.

A total of twenty-one drug and toilet goods' manufacturers and supply firms were taken in as associate members. These firms are:

American Medicinal Spirits Company, Louisville, Ky.

American Pharmaceutical Company, Inc., New York, N. Y.

Arzen Laboratories, Inc., Clinton, Ia.

Burma-Vita Company, Minneapolis, Minn.

Chamberlain Laboratories, Inc., Des Moines, Ia.

Crystal Chemical Company, Inc., New York, N. Y.

William Demuth & Company, New York, N. Y.

Frankfort Distillery, Louisville, Ky.

Gpsy Dyes, Inc., Chicago.

Hinze Ambrosia, Inc., New York.

Knox Glass Bottle Company, Knox, Pa.

Lewis Brothers, Inc., New York.

Lewy Chemical Company, New York.

National Magnesia Company, Inc., Brooklyn, N. Y.

Pharma-Craft Corporation, Chicago.

Pycope, Inc., Joplin, Mo.

H. H. Rosenthal Company, New York.

Upsher Smith Company, Minneapolis, Minn.

David R. Walker, Middleboro, Mass.

Whitney Payne Corporation, Penllyn, Pa.

G. F. Willis, Inc., Atlanta, Ga.

James M. Penland, president of the Southwestern Drug Corporation, Dallas, Texas, was elected president of the association after having served during the past year as first vice-president. Mr. Penland is one of the progressive members of the association, being the head of the company that represents the merger of those Texas houses outside the McKesson combination. He is quiet but most pleasant and genial.

Other officers elected to direct the affairs of the association for the coming year are:

First Vice-president: H. G. Billmire, Humiston, Keeling & Company, Chicago.

Second Vice-president: E. H. DeMoss, McKesson-Peter-Neat-Richardson Company, Louisville, Ky.

Third Vice-president: W. K. Love, McKesson-Van Vleet-Ellis Corporation, Memphis, Tenn.

Fourth Vice-president: W. G. Allen, Tampa Drug Company, Tampa, Fla.

Fifth Vice-president: Peyton Hawes, McKesson-Spokane Drug Company, Spokane, Wash.

Members of the Board of Control (3 years):

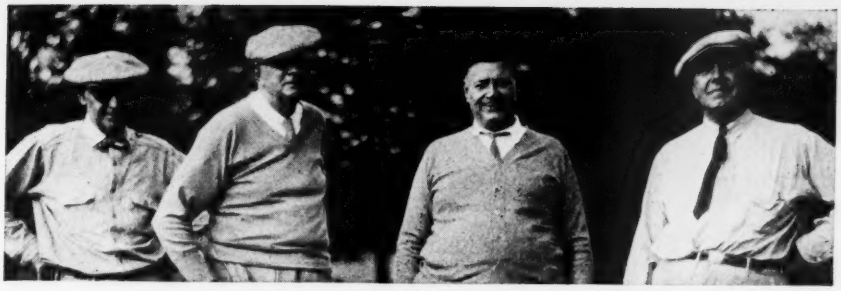
M. E. Sherman, (Chairman) Des Moines Drug Company, Des Moines, Ia.

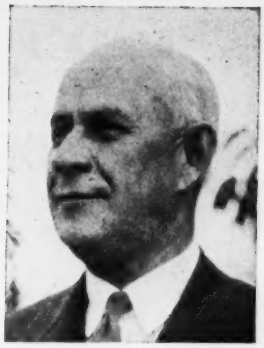
W. M. Brunswig, Brunswig Drug Company, Los Angeles, Cal.

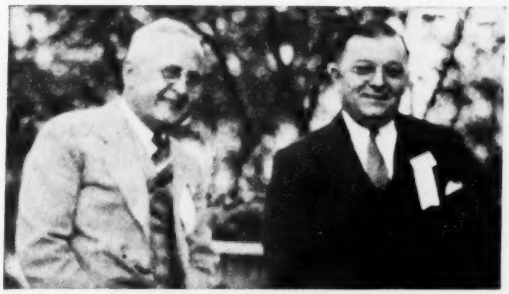
Warner James, Towns & James, Brooklyn, N. Y.

J. Mahlon Buck, Smith Kline & French, Inc., Philadelphia.

Dr. E. L. Newcomb was reappointed as secretary of the association; Frank E. Holiday was reappointed general representative; and W. L. Crounse was reappointed Washington representative.







Harry Phibbs caught these men with his camera at the Chicago N.W.D.A. meeting. We do not think it is necessary to print the names of men so well known

Precipitated Chalk

By Robert H. Buckie*

THIS product, with its distinctive features of high physical and chemical purity, neutral character, white color, soft texture, fine state of division and absorbent properties, finds extensive application in the manufacture of many preparations, among which the most important as a class are dentifrices.

It is the pre-eminent superiority of Precipitated Chalk or Calcium Carbonate in respect to all the properties enumerated above, that distinguishes it from other forms of Powdered Calcium Carbonate produced by various methods, and generally nothing more than a casual examination is sufficient to distinguish these lower grade products. The most obvious feature of the Precipitated Calcium Carbonate is its light texture, generally referred to as bulkiness or lightness, the other materials all possessing greater weight for the same volume, and in many cases an inferior color.

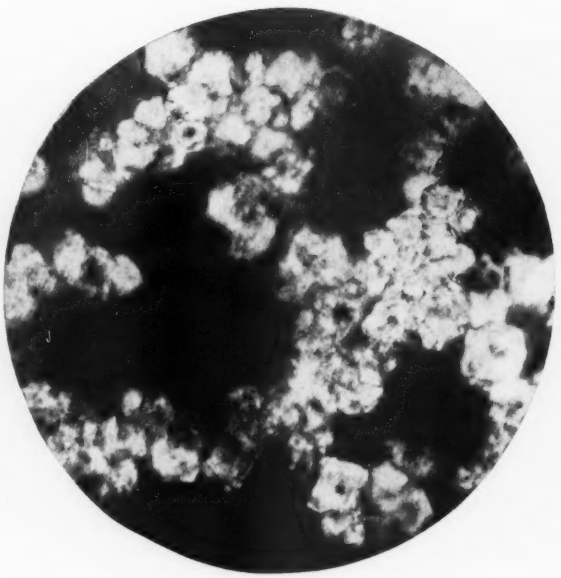
Microscopic examination reveals these powdered forms of calcium carbonates to consist of relatively coarse particles. Those produced from grinding and levigation of limestone, marble or calcite, may be recognized by the characteristic angular outline. Others such as by-product materials appear as solid discs, the forms in both cases differing entirely from those which characterize the Precipitated Calcium Carbonate. It is in respect to the co-related features of bulkiness and extreme fineness of particles that Precipitated Chalks establish their relatively greater value.

Precipitated Calcium Carbonate, properly so-called, is manufactured synthetically by combining hydroxide of lime with carbon dioxide. This method of production is of value in two distinct ways, as affecting the character of the finished product. It permits of physical refinement as well as the chemical purification of the components in a convenient and efficient manner, adequate to the preparation of a high-grade material.

Other important factors born of experience enter into the processing of the raw material to insure a quality to meet the exacting demands of the consuming trades.

Mention has been made of the difference in microscopic character between Precipitated Calcium Carbonate and the lower grade carbonate of calcium products, and considerable variety in particle form, size and manner of aggregation has been noted among various grades of the former material. In some cases the particles appear to be all of definitely crystal character and composed of units varying from 1.5 to about 3.5 microns, occurring in groups with the units radiating from a common center in rosette forms of varying complexity. More generally a portion of these clusters is associated with aggregates composed of particles of much smaller size, apparently ranging down to the order of 0.5 micron, and in other cases units definitely of crystalline shape and character are absent entirely.

The variation in structure will not only affect the response of Precipitated Chalk to the usual physical



By-product Calcium Carbonate

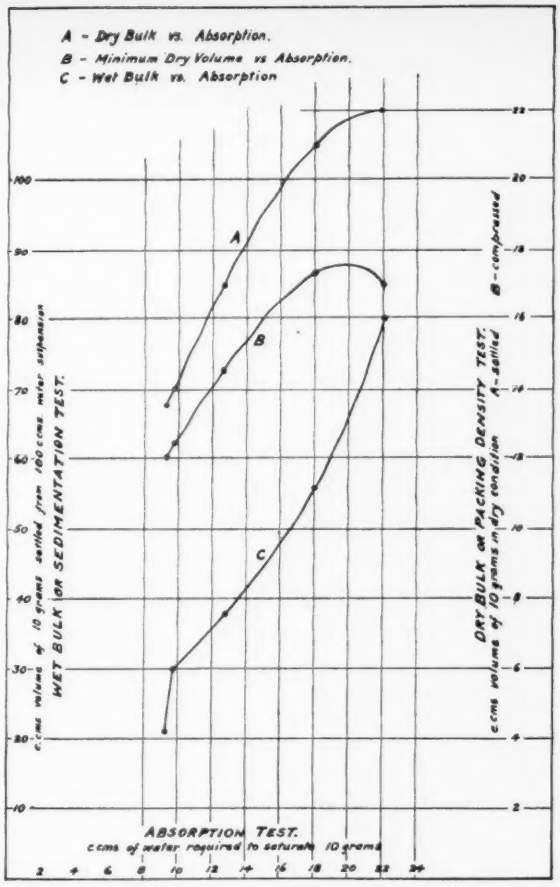
*Technical Department, Industrial Chemical Sales Co.

tests applied to it, but will determine whether particular grades are suitable for specific purposes. For some applications the varieties of chalk composed of the larger definitely crystalline particles of clusters may be of marked advantage, but more generally, and especially for purposes of dentifrice manufacture, the varieties characterized by finer grain are desirable to secure smoother working and the required physical stability of the paste.

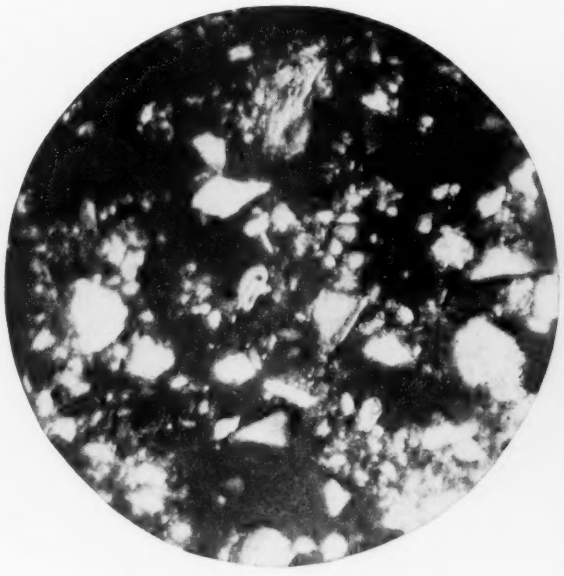
So far as it concerns the manufacture of dentifrices and like products the testing of Precipitated Chalk for suitability may be considered under two heads—chemical and physical—the former being perfectly well defined by the U. S. Pharmacopoeia both as regards methods and standards. With regard to physical methods however, there is no such uniform procedure, although the tests in vogue are an attempt to indicate the state of particle division, or degree of fineness in the materials.

The sedimentation method has been used extensively, and is serviceable as giving a fair indication of the average degree of fineness and of the proportion of ultra-fine particles present. In this, a fixed weight of the dry chalk is shaken up with water in a graduate to definite volume, allowed to settle and the volume of settled chalk sludge read when settling has reached finality. This method does not give very speedy results, as some chalks are of such finely divided character that prolonged settling is required to reach finality. Sedimentation by gravity probably involves some segregation of particle sizes, the coarser settling faster, and the net result being an approach to maximum space arrangement of particles in the settling sludge.

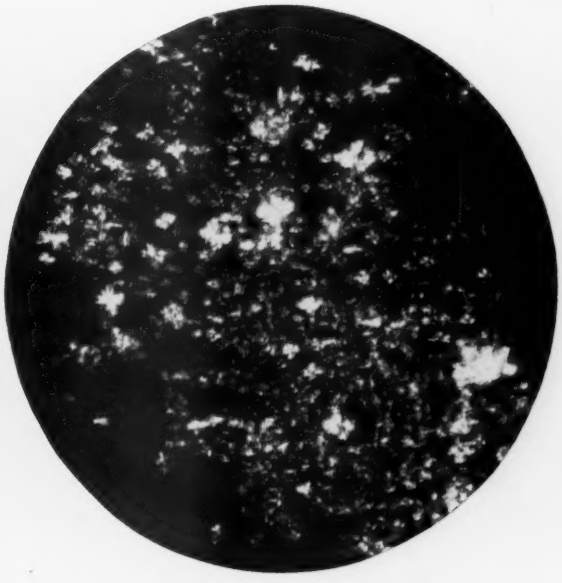
Evidence of this may be found if an attempt is made to speed up the result of the sedimentation test by centrifuging, which invariably gives smaller


A - Dry Bulk vs. Absorption.
B - Minimum Dry Volume vs Absorption.
C - Wet Bulk vs. Absorption
A
B
C
WET BULK OR SEDIMENTATION TEST.
c.cms volume of 10 grams settled from 100 c.cms. water suspension
DRY BULK OR PACKING DENSITY TEST.
c.cms volume of 10 grams in dry condition
B - compressed
A - settled
ABSORPTION TEST.
c.cms of water required to saturate 10 grams

Graph of Absorption Test



Ground Calcium Carbonate



Precipitated Calcium Carbonate

volume for definite weights of material, the differences between settled and centrifuged volume being greater for the bulkier powders. Evidently the centrifuge method, due to the short time in which it is completed, does not allow of segregation, but results in precipitating the powdered material so as to give the minimum space displacement of the mixture of particles. As confirmation of this the writer observed, while examining chalks in conjunction with other substances in powdered form, that the centrifuged volume is equal to the minimum volume of the same weight of each substance in the dry condition.

For the determination of the dry bulk or packing density of Precipitated Chalks, two methods may be employed. That referred to above as minimum volume, consists in filling a weighed quantity of the powder into a cylindrical graduate and measuring the volume after the contents have been compressed by hand to a minimum volume which will be found definite for each substance. The more usual method however, is to allow the powdered material to pack under gravity to minimum volume in the measuring vessel or graduate, by subjecting this to continued vibration. No doubt this method results also in some segregation of particle sizes, and as might be expected, gives higher volume figures for equal weights than when compression is employed. In fact, the differences shown by the two methods are of the same nature as those between the results of the two wet methods referred to, i. e., greater in magnitude for the bulkier substances.

A very useful supplement to the wet bulk test is the saturation test often referred to as the wet density, absorption or flow test. In this is determined the volume of water to saturate a definite weight of dry chalk and produce a mixture of fixed viscosity. As ordinarily carried out by addition of successive measured quantities of water to the chalk in a stoppered tube, two points may be registered, one of these corresponding to the volume of water added when the paste mixture can be made to move freely in the tube by shaking, and the other the volume required to render the paste thin enough to flow down the tube under its own weight.

In some cases there may be as much as 25% difference between these two values, and as a rule the end point first described is to be preferred as being more definitely recognized. As a matter of fact this test may very conveniently be carried out in an open dish using a burette in the usual manner for delivering the water, and mixing by means of a glass rod or small spatula, and with practice close concordance can be obtained in this way with the results obtained by shaking in the tube.

It is to be expected that some fairly regular and systematic co-relation may be found between the results of these tests. To obtain information in this way selection was made of five Precipitated Chalks of one source of manufacture as representing a good range of variation in physical character. Careful determinations were made on these using the two wet methods, sedimentation and absorption, also the two dry methods, determining packing density both under gravity and by use of compression to minimum volume.

The results were all recorded in terms of cubic centimeter volume associated with 10 grams of chalk, being either the actual volume of the powder under the conditions of the test or the volume of water required to saturate it in the case of the absorption test. The graphs show the relation between absorption value and dry volume under gravity, dry volume under compression, and wet bulk by sedimentation respectively. The dry volumes corresponding to 10 grams of chalk are plotted with reference to the vertical scale at the right, which is five times that used for wet bulk since the dry volumes and their variations are relatively smaller. The increasing compressibility of the lighter settling chalks is shown by the increasing vertical distances between corresponding points of graphs A & B, and the relation between absorption value and wet bulk is of a fairly proportional character.

The greater bulk of precipitated calcium carbonate is shown in comparison with ground calcium carbonate

Blind Spots in Your Budget

The glass container industry furnishes an excellent example of how a supply industry, operating in an uneconomic condition, can mislead manufacturers into basing their budgets on costs which farsighted buyers know can not be permanent.

BUSINESS and industry are facing a very real danger to-day because of the all-pervading low price buying psychology. The present period of deflation has succeeded in warping ordinarily sound business judgment to that point where a low price has replaced sound economics as the industrial standard. No longer is there any attempt to analyze existing low prices, each on its own merits. "Deflation" covers a multitude of sins, but when the buyer attributes all low prices to that magic formula, he is endangering his own future as well as the progress and stability of the industry of which he is a part.

The decline in commodity prices due to oversupply, financial conditions, or the present state of world trade, can in no sense be applied as the reason for lower prices of a manufactured product, in a financially sound industry, dependent exclusively upon the home market. Nor should these same lower prices in an industry of this sort always be explained away on the grounds of noteworthy rationalization, bringing with it increased efficiency from new automatic machinery and increased volume of production. Too often, other factors exist, which are forcing operation upon an uneconomic basis, with little or no margin between production costs and sales prices.

It is obviously to the advantage of the buyer to acquaint himself with these conditions when they menace the future of an industry which supplies him with a commodity essential to his own business. In the first place an industry faced by such conditions rarely makes improvements in its product. In fact, deterioration is more likely because of the fact that it is operating on such close margin. Quality is likely to suffer and scientific achievement is at a standstill during a period of this nature.

In the second place, a business profiting by declining costs of raw materials and supplies—and this applies particularly to the drug industry—seldom considers this additional money as net income, but distributes it in additional advertising and merchandising efforts. This speeds up activity all along the line, so that in a short time, the business is operating upon an inflated basis which does not represent the true and normal differential between production cost and list price.

A ready illustration which lends force to this argument is the present status of the glass container industry in its relation to the drug industry. The members of the latter industry who are packaging drug and toilet preparations do not fully appreciate the fact that glass containers are selling entirely out of line with the actual costs of manufacture. Buyers in the drug industry have been prone to group low prices in this kind of supplies with those existing in raw materials generally. "Deflation" has satisfied most buyers as to the cause of these low prices while others have attributed them to improved machinery and increased efficiency of production. As a matter of fact, both these reasons are contributing factors, but whether taken alone or in conjunction with each other, they merely give a distorted picture of the situation as it exists.

In the case of new automatic equipment, supposed to lower production costs by a wide margin, the glass container manufacturers made the mistake of overestimating the savings from this source. It is only within comparatively recent years that bottle plants have changed from hand to semi-automatic, and finally to completely automatic operation. Each step in this transition was accompanied by large expenditures of new capital, with many changes in original installations to get a completely satisfactory process. So completely has the manufacturing operation changed that the industry has changed completely from one hundred per cent. hand operation to nearly one hundred per cent. machine operation. In the modern factory, the bottle is not touched

from the times and other raw materials are dumped into the bin until the finished bottle is inspected for imperfections and packed in shipping containers.

Although this change in operation has lead to lower production costs, the actual savings effected proved in most cases to be only a small portion of the amount anticipated. Bottle manufacturers did not seem to appreciate that with this enormous investment in plant equipment, they could not possibly have the four or five time a year turnover they had had in the past. At the present time, conditions are such that most manufacturers in this field consider themselves lucky if their annual sales reach the same total value as their fixed investment, and a plant representing an investment of $5,000,000 has difficulty in equaling that amount in sales per year. While the industry has reduced manufacturing costs approximately ten per cent. by this rationalization program, proprietary bottles, to take one example, have declined nearly twenty-five per cent. in price during the past two years.

The current business depression has also been a contributing factor to this rapid decline in bottle prices. The bottle industry is particularly sensitive to volume since this factor so materially effects the cost of production. Approximately 80 per cent. of the bottle plant's costs are fixed regardless of whether the plant is operating at 60, 80 or 100 per cent. capacity. Thus a decrease in volume virtually reflects a proportionate increase in production costs.

Another reason for the present narrow margin of profit in glass bottles is the efforts which glass container manufacturers have devoted towards producing an improved and more easily merchandised container. These efforts have greatly increased production costs through the creation of new and improved designs, through more vigilant inspection for imperfections, and, in general, through trying to make containers which have direct sales appeal and which meet all the requirements of modern packaging.

In the case of the prescription bottle, for instance, the glass container manufacturer, in addition to the factors just noted, has given particular attention to the quality of the glass, the shipping container, the display carton for specially items, closures, service and advertising. It is safe to assert that fully 15 to 20 per cent. has been added to the cost of these containers in an effort to make them more acceptable to the ultimate consumer. The additional cost of these bottles is more than equivalent to recent reductions in the prices of other types of bottles, and in fact prescription bottles themselves were reduced in price by 15 per cent. only three years ago.

A fourth reason for the present poor position of the glass container industry is the abuse of the special types of moulds. Bottle manufacturers have been forced to make moulds for buyers whose volume has not been sufficiently large to justify this added investment on his part. This has caused bottle manufacturers to accumulate sizable investments in moulds, which, if charged against the costs of the bottles made from them, would materially lower the prices received for these bottles. This method of operation is obviously uneconomic and unsound, besides being obviously unfair to the large consumer whose volume of purchases well covers the cost of the mould made for him.

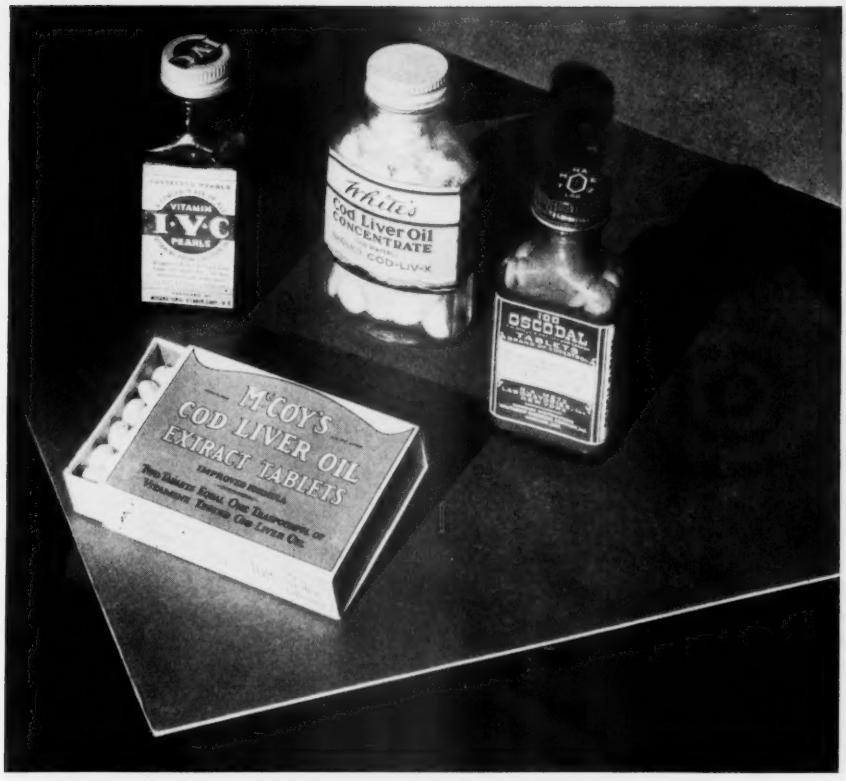
In view of all these factors mitigating against the prosperity of the glass container industry, it is worthy of note that the industry as a whole has not permitted this period of depression to prevent scientific achievement directed towards a better product. In the face of steadily declining prices, this industry has installed design departments and improved the quality of its product by giving a new brilliancy and luster to the glass itself. Its program for standardization and simplification has been progressive and of very material service to the user of glass bottles.

Furnishing, as it does, a commodity essential to the drug and toilet goods industry, the health of the glass container industry very naturally assumes a place of considerable importance in the mind of the drug manufacturer. A true perception of the underlying factors effecting present low prices on glass containers is a matter of vital necessity to him because without this knowledge he is in no position to shape his own business policies.

The successful manufacturer realizes that business consists in progressive growth over a period of time and not merely in the meeting of conditions, without anticipation, as they arrive. In the case of glass containers, it is important that the drug manufacturer realize the reason for present low prices if for no other reason than to protect his own business.

The chief temptation of the drug manufacturer in a case of this kind is to use the money saved by the low container costs in speeding his finished goods into the hands of the ultimate consumer. He may increase advertising promotion costs, raise salesmen's discounts, or invent some new combination deal. In other words, he may place his profits at the same figure and spend the money saved on containers for increasing his sales volume. Then when container prices return to a more legitimate level, he will find himself operating on a larger basis than is justified by the differential between production cost and list price.

Even if he is satisfied to take advantage of present low prices by increasing his profits without increasing his volume, the end result will be practically the same, for in either event he is realizing upon money that some day will not be available. For when he refigures his costs as he must do at that time, his profits will suffer greatly. For these reasons it is vitally important that drug and toilet preparations manufacturers should be familiar with the present conditions existing in the glass container industry so that they may prepare for the time when these industries return, as inevitably they must, to a basis of legitimate prices.



The Trend to Concentrates

Real activity is occurring in the market for cod liver oil concentrates. The entrance of the larger drug manufacturers into this field assures its stability and future possibilities.

AS THE famous vitamins A and D continue to be argued back and forth as playing a most important part in modern therapy, cod liver oil products increase in their importance as major items in the merchandising schemes of the more active manufacturers. For several years now, the more progressive manufacturers have been working towards better methods of standardization of cod liver oil, and toward better methods of protecting the vitamin content of their oils. The discovery that vitamin A is fugitive—being oxidized out of a product by exposure to air—combined with the fact that there is no U. S. Pharmacopoeia standard for vitamin D, has led manufacturers to develop original research in an effort to place their respective oils highest in the esteem of the medical profession and the layity.

While cod liver oil is to some people extremely palatible, there are many who cannot possibly take the straight oil. Many babies have an idiocyncrosy toward the oil. For just such people there have been available emulsions. It is a matter of opinion whether all these emulsions are even as palatible as the oil, and it is also a question whether or not they are as easily assimilated as the oil. These questions are still the subject of debate between scientific minds.

Since the discovery that vitamins are the factors that give cod liver oil its main efficacy, efforts have been made not only to concentrate the vitamins found in the oil, but also to synthesize them. In this effort scientists have been only partially successful

since, while they are able to concentrate both vitamins A and D, they are able to synthesize only vitamin D.

At the time that vitamin D was synthesized, a very large part, if not the majority of opinion among scientific men was to the effect that vitamin D alone was a specific for rickets. It was therefore, thought that Viosterol—the solution of synthetic vitamin D in a bland oil—would be all that was necessary to replace cod liver oil in the therapy of rickets. And due to the fact that this product is highly concentrated and is entirely free from the disagreeable factors that some people attach to cod liver oil, a large replacement of cod liver oil in this therapy was thought to be imminent.

Viosterol has been used, and is still being used in large numbers of cases. But the experience of the medical profession with viosterol has very clearly demonstrated the fact that it is not as effective as cod liver oil in cases of rickets, and the medical profession is now of the opinion that either vitamin A is the specific for rickets rather than vitamin D, or that both of these vitamins are necessary for certain prevention or cure.

This has caused manufacturers to work toward the end of obtaining a concentrate of cod liver oil so that the two effective vitamins can be taken in a form that is less objectionable to a large number of people. And the rate with which these concentrates are being discovered and made ready for the market is increasing with marked rapidity. As a matter of fact within the coming month concentrates will be available from two large manufacturers of cod liver oil products, one of whom is also a manufacturer of viosterol.

As is the case with all types of drug products, some of these products are being marketed in an ethical manner and some are being marketed more after the manner of straight proprietary medicines. Still others have taken proprietary names for their products but are attempting to market their products mainly through the co-operation of the medical profession by means of detailing.

Several concentrates have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association, while others have not been offered for acceptance. The fact of the matter is that at present the Council of the A. M. A. has no definite standard for accepted concentrates and practically all concentrates differ in their potencies of either vitamin A or vitamin D or both. Despite this fact, the A. M. A refuses to allow the use of trade-marked names on accepted products, and requires that they be labelled, White's Concentrate of Cod Liver Oil, McKesson's Vitamin Concentrate of Cod Liver Oil, etc. There is one exception to this rule, namely "Oscodol", the original cod liver oil concentrate accepted by the Council a several yers ago.

The development of concentrates has been slow, due to the fact that exposure to air causes destruction of the vitamin A content. However this problem has been quite completely solved and now tablets are available that will resist the action of the air at least for a long time. One of the recent concentrates encloses the concentrates in a sealed soft capsule and thus excludes the air. Other tablets are apparently coated in a manner that prevents destruction of vitamin A.

The variation in the strength of cod liver oil concentrates is not only complicated by the fact that the manufacturers claim different potencies of vitamin A much in the manner of many of the straight cod liver oils now on the market, but also by the fact that different methods are used to determine the vitamin A and D content of the oil.

Oscodal, the oldest of the concentrates on the market, has been for several years the only product accepted by the Council of the A. M. A. This product is packaged in bottles of 100 tablets, and sells for $2.50 per bottle. No statements as to the actual potency of the tablets are given on the label of the box or the folding carton, but the statement is made that the dose for children is 1 to 2 tablets, and for adults 2 to 3 tablets, three times daily with meals.

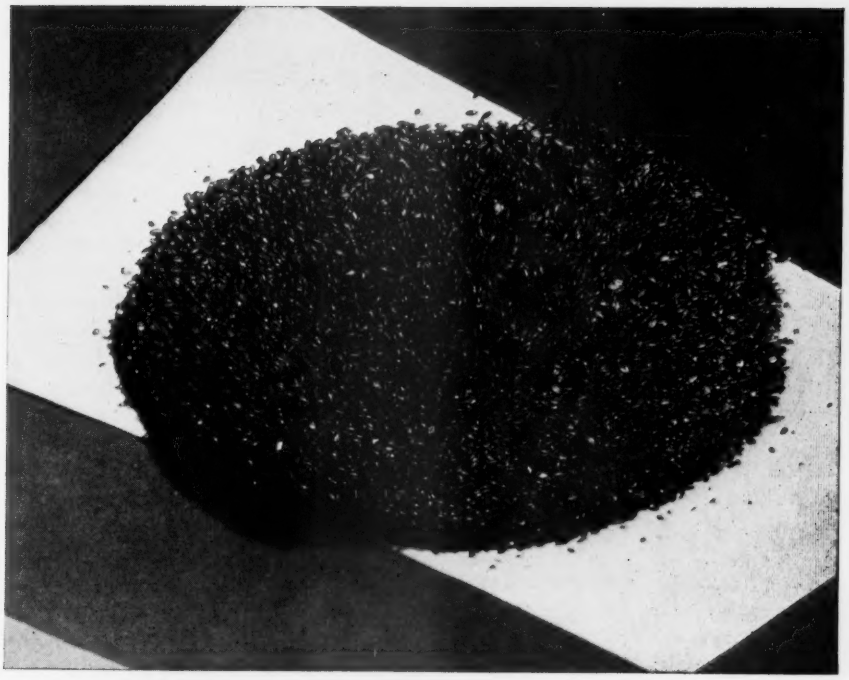
McCoy's Cod Liver Oil Extract Tablets are packaged in a slide cardboard box containing 60 tablets for 60 cents of 110 tablets and selling for $1.00. The dosage recommended is 2 tablets for adults, and 1 tablet for children after each meal and upon retiring. The statement is further made that 2 tablets equal one teaspoonful of tested cod liver oil.

The I V C Vitamin Pearls, produced by the International Vitamin Corporation, New York, are small transparent capsules in the shape of a sphere. They are produced under the Marcus patent, and are marketed in 50 cent and $1.00 sizes, the latter size containing 60 Pearls per bottle. The concentrate is sealed in the capsule, and the statement is made on the package that each Pearl contains on the average the vitamin A and D potency of 2 cc. of pure U. S. P. cod liver oil. This is as far as the claims for vitamin potency go. The recommended dosage is given as 2 Pearls for adults, and one Pearl for children three times a day before or after meals.

White's Concentrate of Cod Liver Oil, manufactured by the Health Products' Company, Newark, N. J., is accepted by the American Medical Association and was the first of the recent products to be accepted. This product is a palatible tablet that is to be chewed. The product sells in bottles of 100 tablets for $1.00. Definite vitamin statements are made upon the package of White's, which is said to contain in each tablet 250 units of vitamin A, and 100 units of vitamin D.

Adex, a cod liver oil concentrate shortly to be placed on the market by E. R. Squibb & Sons, is a products that is to be handled in a strictly ethical manner. This product will sell in bottles of 80 tablets at $1.00. Definite statements are made

(Continued on page 475)



Chemistry of Psyllium Seed

PSYLLIUM seed, Semen Psyllii,[1] is the seed of Plantago Psyllium and related species of Plantago. By virtue of its indigestibility amd mucilaginous character the seed acts as a mild laxative. The dose is from four to fifteen grams and may be administered from one to three times daily. The seed may be mixed with orange juice or prune juice and eaten without mastication; or it may be mixed with a little hot water, and the resulting gelatinous mass spread on bread or eaten with other food. When psyllium seed is mixed with an equal volume of water, mucilage exudes from the cell wall and a gelatinous mass is formed.

According to Solis-Gohen and Githens,[2] psyllium seed is used to increase the bulk of the feces in chronic constipation. They recommend that the seed be taken in doses of one to two teaspoonfuls with meals or two to four teaspoonfuls at the noonday meal. Prior to ingestion the seeds are to be steeped a few minutes in hot water; they swell and agglutinate into a soft mass which is then taken with honey or marmalade.

In addition to the methods of administration enumerated above, the label on a commercial package of medicinal psyllium seed suggests that the dry seed be placed in the mouth and followed by a swallow of water.

The sample of psyllium seed used in this study weighed twelve ounces. It was ground in a drug mill so that the entire quantity passed through a sieve with forty meshes to the linear inch. The following constituents were determined quantitatively: Total solids and moisture, crude fat or ether extract, total ash, insoluble ash, soluble ash, crude protein, crude fiber, pentosans, and galactans. The methods of analysis were essentially those of The Association of Official Agricultural Chemists,[3] reference was also made to the methods described by Pearson and Hepburn.[4] The total solids and moisture were determined by drying ten grams of the ground seed in a lead bottle cap at the temperature of boiling water. The crude fat or ether extract was determined on a two-gram sample of the ground seed by extraction for sixteen hours in a Knorr extraction apparatus which was heated by means of an electric stove; the extracted fat was dried at the temperature of boiling water. This temperature was obtained by means of a water-

jacketed drying oven. The ash determinations were made in a platinum dish which was heated in a gas-fired muffle furnace. The crude protein was determined on a two-gram sample by the Gunning modification of the Kjeldahl method; congo-red was used as the indicator in the residual titration; and 6.25 was used as the protein factor. Digestion and distillation were carried out in the same 500 cc. Kjeldahl flask; and the condenser had a block tin inner tube with a glass adapter at its bottom. The crude fiber determination was made on the fat-free residue remaining in the thimble after the quantitative extraction of the crude fat. For the determination of galactans and pentosans, separate two-gram portions of the ground seed were used. In the determination of pentosans the filtrate from the furfural phloroglucide was treated with an additional portion of phloroglucinol hydrochloric acid; failure of a precipitate to form demonstrated complete precipitation in the determination proper.

The desiccators were provided with anhydrous calcium chloride as a dehydrating agent. All weighings were made to one-tenth of a milligram. Titrations were made to one-twentieth of a cubic centimeter using a blue line glass stopcock burette.

The psyllium seed was found to have the following composition:

	Per cent. of:	
	Seed	*Total Solids*
Total solids	91.50	100.00
Moisture	8.50	0.
Crude fat	6.40	7.00
Total ash	3.16	3.45
Insoluble	2.95	3.22
Soluble	0.21	0.23
Crude protein	17.83	19.49
Crude fiber	11.50	12.57
Nitrogen-free extractives	52.61	57.49
Pentosans	9.85	10.77
Galactans	0.31	0.34

The alkalinity of the soluble ash was determined by its direct titration with deci normal hydrochloric acid. The alkalinity of the insoluble ash was determined by dissolving it in 25.00 cc. of deci normal hydrochloric acid diluted with distilled water and heated to boiling, followed by residual titration of the excess acid with deci normal sodium hydroxide. Methyl orange was used as an indicator. The alkalinity has been reported as cubic centimeters of normal acid required to neutralize the ash (soluble or insoluble) yielded by 100 grams of total solids.

The values obtained were:

Alkalinity of soluble ash	6.48
Alkalinity of insoluble ash	41.72

Reducing sugars were not present, for 10 cubic centimeters of mixed Fehling solution were not reduced by as much as 5 cubic centimeters of a filtered 2 per cent. decoction of the ground seeds.

The crude gum was obtained by boiling the ground seed with fifty times its weight of water, filtering while hot, first through linen, then through filter paper, and evaporating the filtrate to dryness. The gum was black and tar-like, but became brittle when subjected to the temperature of the ice box and remained brittle when withdrawn from the latter. It was tasteless and odorless and became slippery and soft when held in the mouth. On analysis it was found to contain 16.45 per cent. pentosan and 0.02 per cent. galactan.

The gum was boiled with fifty times its weight of water; all but a few small flocks dissolved. The solution was filtered through linen. The filtrate had a brownish black color, was acid to litmus and did not gelatinize or thicken on cooling. The filtrate was characterized by the following responses to typical gum reactions which are described by Fuller.[5] In each test five cubic centimeters of the gum solution were used.

(a) Ferric chloride (1 cc. of 25 per cent. solution) produced a marked darkening in color, which disappeared on the addition of alcohol (15 cc. of 50 per cent. alcohol); no precipitate was formed.

(b) Lead subacetate (1 cc. of U. S. P. solution) produced a curdy precipitate.

(c) Copper sulphate (2 cc. of 10 per cent. solution) produced a transient mahogany color; further addition of an excess of sodium hydroxide (5 cc. of 5 per cent. solution) produced a voluminous flocculent bluish green precipitate which did not dissolve on boiling.

(d) Potassium hydroxide (2 cc. of 5 per cent. solution) followed by shaking produced a yellow froth.

(e) Iodine (several drops of Lugol's solution) produced no change save the color due to the presence of iodine. Starch and erythrodextrins therefore were absent.

(f) Alcohol (10 cc. of 95 per cent. alcohol) produced only a faint turbidity on mixing; in a few moments a marked flocculent precipitate appeared, at first filling the whole tube and gradually depositing on the bottom.

(g) Hydrochloric acid (5 cc. of 36 per cent. acid) and boiling darkened the solution and imparted to it a faint purple tinge.

(h) Sulphuric acid (5 cc. of concentrated acid) and boiling produced only a caramel odor. The odor of organic acids was not noticed.

(i) Phosphoric acid (5 cc. of 85 per cent. ortho phosphoric acid) produced, on boiling, a darkening of color, and the evolution of a fragrant odor. The odor of organic acids did not appear.

(j) Fehling's solution was not reduced.

(k) Borax (5 cc. of 2 per cent. solution) produced no change. Repetition of this test with 5 cc. of 4 per cent. solution of borax gave the same result.

(l) Lead acetate (5 cc. of 10 per cent. solution) produced a slimy, flocculent, voluminous, pale yellowish green precipitate.

(Continued on page 517)

China's Drug Market

Chinese Comprador

By
Walter Buchler

HYGIENE is hardly known in China among her 460 to 500 million people, and it is, therefore, not surprising to find disease and suffering widespread among the Chinese masses. Foreign missionaries and Chinese doctors trained abroad or in mission hospitals are insufficient in number to cope with the vast territory and influence to any appreciable extent Chinese superstition. Crude medicines are prescribed by Chinese doctors (who are not required to undergo examinations before engaging in practice, but are apprenticed to practitioners already initiated into the mysteries of the trade in a similar manner), and are exceedingly popular among the Chinese, much more so than the doctor himself. Druggist and medicine shops often prescribe a remedy themselves, and a typical prescription reads: "The prevailing bad weather has attacked the body; the food has remained in the stomach, and the body is hot and the stomach defective. The pulse is floating and slippery, and the tongue yellowish. The cure to be adopted is a cleansing of the stomach. Take wood lice shells, 1 mace (3.73 Gms.); elephant's teeth, 3 mace; orange peel, 1 mace; a red fungoid growth from the root of a tree, 3 mace; a bamboo leaf, 3 mace; bats' spines, 3 mace; fragrant root (Angelica refracta), 2 mace." The use of patent medicines—patented by secrecy, the secrets of healing being kept in the family for centuries—has thus been known for centuries in China, and there is now no richer field for the proprietary medicine trade, which should not be overlooked by manufacturers and exporters in this country. Contact with foreigners has made the Chinese more and more appreciative of foreign medicines, which are steadily making headway, and are more efficacious than local products. The following table of China's imports of medicines and pharmaceutical preparations should convince even the most conservative that that market provides a good outlet even in a country where "wars" and political chaos are nothing unusual. Figures for trade done during 1929 are not yet available, but that year was a record year for business in medicines and pharmaceutical preparations, and prospects for this year in China are promising.

Imports into China of Medicines not Otherwise Specified

From:	*1926*	*1927*	*1928*
U. S. A.	487,536	379,922	274,633
Hongkong	1,416,069	2,142,506	2,915,141
Great Britain	363,521	239,039	375,393
Germany	422,844	359,606	320,734
Netherlands	335,134	298,045	214,427
France	214,709	276,497	200,635
Japan	939,623	817,936	678,863
Total including others.	4,662,969	5,047,024	5,445,299

Total imports for January to June 3, 1928, 119,447; 1929, 3,483,969.

All Values in Haikwan Taels Exchange Equivalents

1926 I. H. Tael	$.076
1927 I. H. Tael	.69
1928 I. H. Tael	.71

Imports of medical and pharmaceutical preparations (not included in the above figures) average $2,500,000 yearly.

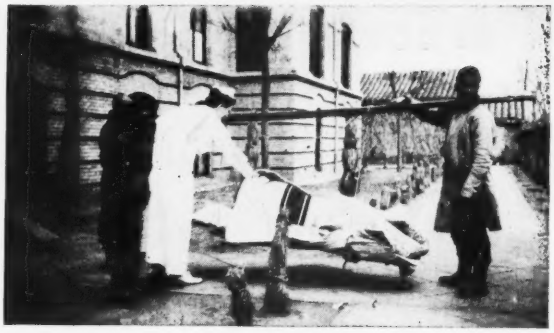
The drug and medicine trade has always been a flourishing one in China, as it yields good profits on a quick turnover to both manufacturer, wholesaler, and retailer. Japan's success in this market, which is evident from the above table of statistics, is due to the thoroughness with which she has exploited every possible outlet for her manufactures; and "Jintan" (Golden Pill) is to be seen in practically every Chinese village, while Western preparations have not yet penetrated so far. It is not difficult to introduce a

good patent or proprietary medicine into the Chinese market; the Chinese quickly take to anything new and reasonably efficacious for the illness for which it is recommended, provided it is well and properly advertised and moderately cheap. All medicines with some remedial powers have good prospects for their sale in China, if they are introduced in the right manner. The Chinese prefer medicines prepared in tablet or pill forms, preferably with a palatable taste. It is hardly possible to enumerate the different kinds of medicines which find a ready sale in China, for with the lack of hygiene and the consequent great amount of disease, the field is unlimited, and merely requires intelligent and careful development.

A brief outline of the kinds of medicines prepared by the Chinese and the uses they are intended for will enable those interested to understand the Chinese attitude towards medical preparations.

The Chinese use ground fossil bones (called Dragon Bones—"Lung Ku") as a medicine, because it is said to have wonderful healing properties. It is one of the most popular medicines in China and is centuries old. It is prepared from the bones of animals (generally found when digging for water, near caves, especially in the North of China). The bones are separated, dried, cleaned, piled into heaps, then sold to the wholesale dealer, who sells them to drug stores and medicine shops. The price is about $9 per 133⅓ lbs. (1 picul). The bones are crushed to fine powder, which is taken in suitable doses in a cup of tea. This powder is supposed to be especially good for curing liver troubles, absorbing excessive fluids in the body, and for medicating insanity. Cassia Lignea is also a valuable medicine in China, and is used to flavor medicine and for making incense. Apart from its uses in medicine, musk is used in perfumery and for the preservation of clothes from moths, etc. China exports about $75,000 a year, half of which is taken by France for her perfumery industry. China Root is used in medicine as a nerve tonic and sedative, and prepared by making a mixture of the China Root powder and rice flour into small square white cakes. Deer's horn is considered a valuable tonic for weak and aged people, also as a general blood tonic and stimulant, and is supposed to be remarkably good for healing wounds; it is also employed as a disinfectant. The basis of most Chinese medicines used is vegetable herbs, which are consumed in large quantities. To mention but a few of the more important: Licorice root is a drug of great importance in China, and is used as a tonic; ginseng, kadsura, rhubarb, plantago major, and hundreds of other plants are used by the Chinese as medicinal herbs.

Temporary dispensary in China



Patient entering Pekin hospital

When selling in the Chinese market, one should bear in mind that the Chinese buy pharmaceutical preparations, drugs, and medicines more according to trade mark rather than judging the medicine by its healing properties.

It is, therefore, essential to have a thorough knowledge of trading methods in the Chinese drug business, Chinese mentality, and the best means of advertising. The following outline of how the proprietary medicine and drug business in China should be conducted with the view to developing sales as quickly and as effectively as possible should enable exporters to enter that market on a sound basis.

Firms specializing in no particular range of goods or any market will find their interests best served by appointing a foreign firm already established in one of the Treaty Ports of China (preferably Shanghai, which is the center of China's import and export trade) as their agents. In addition to a liberal commission, the principals would have to grant easy terms of payment, which the merchant in Shanghai has also to do when marketing a new proprietary article, and prepare for a considerable outlay for advertising.

The Chinese market is, however, so large that larger firms specializing in drugs and allied articles would be well advised to open up their own branch in Shanghai, and build up their own selling organization in China. For this a "Comprador" (sort of go-between) is required. He obtains the orders, and for this purpose engages his own staff, the most important factor of which are the "shroffs" (salesmen and collectors). The Comprador receives a commission, varying from

(*Continued on page 517*)

Laxatives in the Drug Act

While no immediate check-up on label statements of laxatives is contemplated, we have obtained from the Food and Drug Administration their views on what constitutes violations.

UNLIKE some other well-known classes of medicinal products, laxatives have not been dealt with, as a class, by the Food and Drug Administration, of the U. S. Department of Agriculture. Nor does it appear when they will be so dealt with. There is no prospect of inauguration of a project for dealing with laxatives and liver remedies at a definite time in the future, according to Dr. J. J. Durrett, Chief of Drug Control.

Laxatives and so-called liver medicines are very closely hooked up together, in the popular mind and in the drug trade, so closely hooked up, in fact, that officials believe that it is hardly practicable to deal with them except together. In dollars, this class of products represents the largest value of any class of product of the American drug manufacturing industry. And some time the Food and Drug Administration will not unlikely undertake a specific survey of this class of products, as it has in the case of antiseptics, malaria remedies, and alleged remedies for influenza, lagrippe and pneumonia.

Meanwhile, however, the Administration has given only occasional attention to laxative preparations and liver medicines in individual cases, which have involved either what the Department thought to be unusual labeling, or in which claim for laxative effect or liver effect was made in connection with alleged remedies for influenza or other preparations that came within the scope of the Department's adopted specific projects mentioned above.

In connection with the consideration of these individual cases certain principles have been enunciated, which are expected to be the basis of the policies to be set up as a guide in the consideration of other laxative preparations and liver medicines if and when the Department undertakes a general campaign. After conferring with officials of the Food and Drug Administration and with representatives of drug trade interests, it is possible to present some authoritative information on the subject of labeling of laxative and liver medicines.

Admittedly, it is easier to ascertain what can *not* be placed upon such a label than it is to find out what *can* be placed upon it. This is because of the provisions of the food and drug law and the policy of the Department in administering it, when taken together, the Department holds, it is not possible for it to state definitely in advance that a given label will meet all the requirements of the law. In other words, a label may be approved, with the reservation that there is "no further objection to it at this time," but that does not debar the Department from requiring that the label be changed further, perhaps in some other respect, at some time in the future. But officials say that it should be possible for a drug manufacturer who wants, in good faith, to abide by the law, to see a sign post and be guided by the pointing hand in reaching a conclusion as to what he can legally put upon his label.

"I am unable to state any set policy for dealing with laxative preparations or liver remedies, so-called, as a class," said Dr. Durrett. "Every such preparation must stand on its own merits. We have not studied laxatives as a class and so are not in position to give a complete picture of the situation as regards them. We have found in certain particular instances, however, that laxatives claim were made that attracted attention. In such cases we have studied the ingredients of that particular preparation, have looked up the authorities on the subject, and compared the claims with the ingredients and authorities, and have taken action if deemed necessary to stop misbranding."

In the first place the Department holds that it is not permissible to state on a label that a laxative preparation will cure or relieve "constipation," in general. This is partly because some cases of constipation may be due to the food eaten by a person, or to bad habits.

It would be permissible, on the other hand, to label a preparation as being for the relief of "temporary," "simple," or "occasional" constipation, provided the

preparation is in fact laxative in its effect and provided the dosage recommended on the label is such as to produce that effect in the average case.

Besides simple, occasional, or temporary constipation, it is held, there are also cases of chronic constipation, which would not be reached by an ordinary laxative. In some instances constipation may be caused by a stricture of the intestines, or there may be an impacted bowel or a stoppage of the bowels, which a laxative would not remedy. In some such instances surgical treatment might be necessary. Hence, the ban on the use of the general term "constipation" on laxatives and liver remedies.

A widely advertised preparation on the market for which great claims were made with reference to gastric and intestinal conditions, upon being studied by the Department, is understood to have been found to contain practically nothing but alcohol, a laxative and bitter principles. Its immediate action was found to be that of an alcoholic, stimulating the person taking it; its second most important action was as a stomachic preparation, its third was slightly laxative. The claims of this particular product are understood to have been stopped.

"In taking laxative preparations," says Dr. Durrett, "a person should not get the idea that he will get rid of constipation or cure that ailment simply by taking a pill, because that won't be the case. Instead, it may simply empty his bowels.

"I don't know any cure for constipation, which has its origin in a great variety of conditions. There is not any medicine or group of medicines that will remedy that situation. There is, however, a great group of medicines that will cause elimination of the contents of the lower bowel. But they act only as temporary agents, and don't keep the bowel cleaned out. The laxative action of some medicines is merely incidental to certain other effects from them."

Use of the word "laxative" on a label is permissible, it was stated, provided the preparation covered by that label is laxative in fact, in the dosage recommended on the label. By the same rule it is permissible to label a preparation as "purgative" or "cathartic," provided the dose recommended will, in a great majority of instances, produce that effect.

Different doses may be recommended on the label to procure a laxative" effect or to make the preparation act as a "cathartic" or a "purgative"; for example, one pill or one spoonful in the former instance, two pills or two spoonfuls in the latter instance.

Nor does the Department object if a variable dose is recommended for laxative effect, for example, a teaspoonful, the amount to be increased or reduced according to the effect obtained. This is in recognition of the fact that an amount that would be required to produce the desired effect in one individual may not be the same in the case of another. A dose may vary considerably, with the age and size and general make-up and constitution of the individual. The average dose should be stated, which may be adjusted up or down as required.

Vegetable laxative claims used to be more popular, perhaps, before the days of coal-tar derivatives. It is not necessary for a manufacturer to state the ingredients in his preparations, either on his label or to the Department officials, but if he does state the ingredients in a preparation, on the label, he must state the truth. He can not label his product as a vegetable laxative and then put in much calomel or phenolphthalein with only a little bit of senna it is held. Whatever ingredient is named on a label has got to be the one or the principal one, that produces the laxative effect. Most manufacturers, it is said, don't care to publish their formulae.

Combinations of laxative ingredients with tonic preparations are not viewed with favor by Drug Control, as a general proposition. In discussing this, it was pointed out that a laxative is supposed to produce results in a day or two, while, on the other hand, a tonic effect results from the continued taking of a tonic preparation over a considerable period of time. A combination of the two elements is not deemed satisfactory by the powers that be in the Department of Agriculture, for one reason because it may tend to form in the medicated person, the habit of taking laxatives. Another reason given is that the laxative ingredient may carry the tonic ingredients out of the system. "It is not good business to put them together. We don't encourage it. They are incompatible," says Drug Control.

Labels of alleged laxative preparations bearing such wording as "for the elimination of waste materials or poisons from the body," or "from the system," are frowned upon by the Departments. Its view is that a laxative does not accomplish that purpose; that it will not eliminate poison, and that it will not eliminate waste material "from the body" or "from the system." A laxative may eliminate waste material from the intestines or from the lower bowel, it is explained, but to state that it eliminates all waste materials from the body or from the system is inaccurate, according to the judgment of Dr. Durrett. He points out that such a statement fails to take account of the fact that the kidneys and the skin also eliminate waste from the body.

"As a general proposition," says Dr. Durrett, "a label on a laxative preparation referring to the elimination of waste material should be limited to the elimination of waste from the lower intestines. There would be no objection to that provided the ingredients and the dosage recommended were such as to produce that result."

It is understood that the tendency in the trade is away from use of the word "constipation" on labels for laxative preparations. The word "laxative" is becoming preferred. Everybody knows what a laxative is, it is declared, and the word is not objectionable to the government. Coupled with the use of that word, it is said, the tendency is to mention one dose

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for laxative purposes and a larger dose for purgative or cathartic purposes. This tendency meets with approval of the Department, it is understood, provided the product label comes up to specifications.

So-called liver medicines are not infrequently combined with alleged laxatives in preparations that are claimed beneficial for liver trouble and for constipation. Some of them have been claimed to stimulate the liver. This is denied, in general, by the federal food and drug authorities. As a general rule, they say, so-called liver laxatives do not stimulate the liver as a whole. They merely, in the case of bile salts, tend to increase the flow of bile, but that does not stimulate the liver as a whole, it is declared, because the liver has many functions besides that of producing bile.

"Many liver medicines, so-called, have been nothing but laxative, cathartic or purgative preparations," remarked Dr. Durrett. "They don't stimulate the liver in its entirety. Some of them don't even stimulate or increase the production and flow of bile. An individual may imagine that such a preparation which he takes has that effect, because bile may color the stools, but generally it is only the normal amount of bile that appears. Nothing that we know of stimulates the liver in its entirety.

"The liver has many important functions besides secreting bile. Sugar goes to the liver where it is stored as glycogen and when the body needs that sugar to burn for the production of energy and heat, the liver reconverts the glycogen into soluble sugar and sends it into the blood stream. That is a very important function of the liver. Many so-called liver medicines have nothing whatever to do with that."

The Department has let it be known that before a medicinal preparation can be held out to be a liver remedy, on its label, it must contain a cholagogue, which is an ingredient that acts on the liver by stimulating the production or flow of bile. And in that case, it is held, no general claim should be made that the product is a "liver medicine," "cure" or "remedy," because there are various conditions of the liver and functions of the liver which it does not affect.

Cholagogues mentioned by Drug Control include bile salts, ox gall and salicylates of various kinds. Sodium taurocholate and sodium glycocholate are two common bile salts. The presence of these ingredients or of other bile salts may be indicated on the label, but they must be there in sufficient quantity to produce a cholagogic action, and the dosage recommended must be adequate and recognized to do that.

"The liver has nothing whatever to do with constipation," according to Dr. Durrett, "except that the bile probably helps to keep the intestinal content more fluid and exercises a normal laxative action in the individual. To increase the flow of bile may possibly help constipation. Bile probably acts to increase the volume of stools, to make them more watery, and as a mild laxative. But to get that result from bile one must take bile salts."

Use of the words "liver disease," "liver remedy," "liver salts," or "liver salts" on a label is not proper, in the opinion of the Food and Drug Administration. Nor should a label say that the product stimulates the liver." It may be said, on the other hand, that a bile salt or chologic preparation "stimulates the production or flow of bile," but not that such a preparation stimulates the intestinal tract or relieves constipation. Department officials believe it would be proper to say that such a preparation would tend to empty the bowles or the lower intestines. Always with the proviso that the proper dosage to get results is recommended on the label.

It will be seen from the above that the Department does not object to mentioning the names of a disease, constipation for example, or the names of organs or parts of the body such as bowels, intestines, liver, bile, etc., in the manner above indicated as approved, provided a reading of the label is not deceptive or misleading. "Disease names are not taboo on labels," says Dr. Durrett, with the proviso that they are properly handled.

Officials declare that this policy is not in conflict with that enunciated by the Food and Drug Administration in its pamphlet containing information about drugs, issued in October, 1929, which said, among other things:

"Names of diseases or disorders appearing in the labeling of a medicine in such a way as to convey to the purchaser the impression that the product in itself is a competent treatment for the diseases mentioned should not be used unless the medicine is in fact such a treatment. * * * * The question is, does the product in itself, by reason of the contained ingredients, constitute a competent treatment for the disorders named ?

"Names of organs or parts of the body should not be used, unqualified, upon labels unless the product can properly be considered a treatment for any and all disorders to which such organs or parts may be subject. When such names of organs or parts of the body are qualified the product should be in fact a treatment for the condition indicated by the labeling."

While the above quotations and other portions of the "information about drugs" were not in the form of official rulings or decisions by the Department, the principles therein enunciated still remain in effect, it is declared, and the statements, definitions and limitations set forth above are in accord with those principles.

The burden of proof is upon the manufacturer to show that his laxative preparation or liver medicine, or other preparation, really contains the necessary ingredients to meet the claims on his label and that the dosage thereon recommended will get the results claimed. He must be prepared to make good on his claims and, in fact, as the Food and Drug Administration expresses it, he is under obligation to show that his preparation is as claimed, in order to avoid trouble on the charge of misbranding.

On the other hand, the burden of proof is upon the government, according to Dr. Durrett, to show that a preparation is fraudulent. "We don't make a case under the fraud section of the food and drugs act," he says, "until the Solicitor's office, Department of Agriculture, tells us that they can prove fraud where therapeutic claims are involved."

In connection with liver medicines and laxatives, there have been interesting reports circulated in well informed circles for some time concerning at least three well-known preparations in these lines. One report is that the Department sought at one time to force a change in the name of Sal Hepatica, a Bristol-Myers product, on the ground that the words mean literally "liver salt." Another is that the name of another product was changed from "Livertone" to "Levertone," by Drug, Inc., on the demand of the Department, which was represented as thinking that the first name conveyed the idea that the product would have a general tonic, or toning, effect upon the liver. The third case referred to is that of Carter's Little Liver Pills, which is reported to have been under discussion for some time, in the Department, with a view to the possibility of a change in the name of that product.

Department officials decline, under their rules, to discuss the cases of particular products, by name, unless and until they are the subject of official action in the form of seizure or court proceedings. It is understood, however, that the Sal Hepatica case has not been up for consideration, nor has that product been studied, during the incumbency of Dr. Durrett as Chief of Drug Control. While to some government medical men Sal Hepatica means nothing but "liver salt," other experts assert that the name means "hepatic salts" or "salts of hepatica,"—hepatica being a vegetable or botanical. To which government medicos reply that there is no difference between "hepatic salt" and "liver salt," that the definition of "hepatic" is "pertaining to the liver." However, they do not seem to be bothering about the matter.

In conclusion, Dr. Durrett says that while there is no specific project on the program of the Department having to do with laxatives and liver medicines as a class, and no special campaign directed against them, yet "we pick them up, when misbranded, under the law, any time we find them," and each will be dealt with on its merits."

Federal Judge Runyon, in Newark, N. J., has issued a temporary injunction, at the petition of the Ex-Lax Manufacturing Co., New York, restraining the Tru-Lax Products Co., Newark, from using for a laxative product containers similar to those used by the petitioner. The court also ordered the Tru-Lax company to show cause, October 30, why the injunction should not be made permanent.

Mallinckrodt Chemical Works of Canada, Ltd., which up to the present time has been distributing only, has purchased a building on Front st., Toronto, to manufacture some of their products there. R. B. Murray, a Canadian, will be in charge of the local operations.

Sidney Colgate Dies

Sidney Morse Colgate, chairman of the board of the Colgate-Palmolive-Peet Co., died at his home in Orange, N. J., November 10. Death was due to heart disease.

Mr. Colgate, one of the five Colgate brothers who succeeded to the control of Colgate & Co., was associated with it for forty-four years. Mr. Colgate was president of the company founded by his grandfather from 1925 until 1928, when it became a part of the Colgate-Palmolive-Peet Co.

Mr. Colgate was born in Orange on Sept. 11, 1862, was educated at the Free Academy at Norwich, Conn., and Yale University, being of the class of '85. Immediately upon finishing college he entered the family business and in 1896 he became a member of the firm.

F. W. McNess Dies

Frederick W. McNess, secretary and one of the founders of the Furst-McNess Co., chemists and manufacturing pharmacists, Freeport, Ill. died in Chicago, October 21 after an illness extending over a period of nine months. Mr. McNess was born at Cleveland, July 8, 1879, receiving his education in the Cleveland schools and the Philadelphia college of pharmacy. He helped organize the Furst-McNess Co. in 1908 and was secretary and chief chemist up to the time of his death.

Coleman du Pont Dies

General T. Coleman du Pont, former United States Senator and one of the foremost financiers of the United States, died Nov. 11 at his home in Wilmington. He was sixty-six years old.

Unlike many members of the du Pont family, he was not born wealthy, and he started out in life to win his own fortune. In 1903 at the request of members of the family he took over control of the business and to him is largely due the gigantic success of the present organization.

He is survived by his wife, three daughters, and a son.

T. Frank Thompson

T. Frank Thompson, for fifty years associated with the drug business, died November 1 at his home in Providence, R. I. He was sixty-five years old and is survived by a widow, a daughter, and a son. Burial was in Rumford, R. I.

Mr. Thompson was for ten years president of Blanding & Blanding, Inc., of Providence, until that organization became a unit of McKesson & Robbins, Inc., early in 1929. After the merger he became assistant manager of the wholesale department.

L. W. De Zeller Dies

Louis William De Zeller, chief metropolitan salesman for Seabury & Johnson, manufacturers of surgical and medical specialties, New York, died November 4 at his home in Gramercy Park. Mr. Zeller had been in the employ of the Seabury & Johnson firm for the last fifty-two years and was perhaps the most widely known salesman in his line in the East. He was very active in developments in the drug trade relative to its welfare and in this manner he became a most active worker in the formation of many of the drug trade bodies of this city.

Manly P. Green, one of the organizers of the Norwich Pharmacal Co., Norwich, N. Y., died October 8 at his home in Pasadena, Calif. Mr. Green was born in Locke, N. Y., in 1856, moving to Pasadena in 1893 because of his health. Mr. Green is survived by three daughters, Misses Ruth and Faith Green and Mrs. E. W. Salsbury.

SCIENTIFIC ADVANCES

A Review of Patents

UNITED STATES PATENTS

Vitamin Food Product

This medicinal food product consists of a vitamin containing vegetable substance in granular form, the individual granules of which mixture are permeated with paraffine and cod liver oil The method of making is as follows. A quantity of paraffine is placed in a suitable receptacle and melted. A predetermined quantity of cod liver oil is then added and the mixture is heated until it is clear. The mixture is agitated and while it is still in a liquid condition a predetermined quantity of dry, granular, vegetable material is added. This vegetable substance is stirred into the melted mixture and the agitation is continued until the same is reduced to a homogeneous, granular condition. The mass so obtained in finally cooled. H. Placak, assignor, The G. E. Conkey Co., Cleveland, Ohio. U. S. Patent No. 1,764,085, filed Sept. 3, 1927.

Colloidal Silver

Colloidal silver, which possesses therapeutic properties, is prepared in the following manner. Silver nitrate solution, which has an approximate concentration of twenty per cent., is mixed with a mixed solution of dextrin and sodium hydroxide with lanolin. The theory of the process is to treat the silver nitrate with a reducing carbohydrate, such as dextrin, in the presence of an alkali. Thereupon a substantial amount of lanolin is added and the mixture is then maintained in a state of quiet until a colloid of silver is formed. T. Satow, Tokio, Japan. U. S. Patent No. 1,764,417, filed January 22, 1926.

Menthol

The process of making alkyl-cyclohexanols consists in heating a dihydroxy-phenylmethane derivative in an atmosphere of hydrogen at 150° to 280° C. The process is carried out in the presence of a hydrogenation catalyst and of a contact mass which has a high degree of porosity. The operation is continued until no more hydrogen is taken up. W. Schoeller, Berlin-Charlottenburg and R. Clerc, Berlin, assignors, Schering Kahlbaum A. G., Berlin, Germany. U. S. Patent No. 1,765,620, filed June 22, 1928.

New Anaesthetic

The new anaesthetic is the sulphate of 4-iodo-3-aminbenzoic acid diethylamino-ethanol. This substance comes in the form of colorless crystals which are soluble in water. They possess a melting point of 163° C. W. Schoeller, Berlin-Charlottenburg and H. G. Allardt, Berlin-Reinickendorf-West, assignors, Schering-Kahlbaum, A. G., Berlin, Germany. U. S. Patent No. 1,765,621, filed Aug. 18, 1927.

Lactic Acid Derivatives

Derivatives of lactic acid are made from the residue containing a lactate which is obtained by the evaporation of the neutralized fermentation product of materials comprising carbohydrates. The process involves extracting the lactate from this residue with the aid of methanol. M. Luther, Mannheim, and H. Beller, Oppau, Germany, assignors, I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. U. S. Patent No. 1,766,715, filed Feb. 4, 1928.

Stable Salicylate Composition

A new composition possessing therapeutic properties, contains a non-poisonous alkali earth salt of acetylsalicylic acid mixed with a small quantity of the chloride of the non-poisonous alkaline earth. M. Coplans, London, England. U. S. Patents No. 1,764, 933, filed December 12, 1928.

Arylaminoalcohol Compound

These compounds have the following general formula:—C_6H_5 CHOHCH(R)NR′R″. In this formula R represents an alkyl group, R′ a monovalent saturated aliphatic hydrocarbon radical and R″ a hydrogen or a monovalent saturated aliphatic radical which contains more than one carbon atom. The R, R′ and R″ group substituents together contain not less than three carbon atoms. R. Adams, Urbana, Ill., assignor, Abbott Laboratories Inc., North Chicago, Ill. U. S. Patent No. 1,767,423, filed January 27, 1928.

BRITISH PATENTS

Organic Mercury Compounds

Organic mercury compounds are produced by reacting a mercury salt with an aryl, alkyl, or aralkyl derivative of a tetravalent metal which lies above mercury in the electrochemical series, the reaction being effected in the presence of a solvent. Examples are given in which ethyl mercuric chloride is produced from tetraethyl lead and mercuric chloride dissolved in alcohol, or from mercuric chloride and triethyl lead dissolved or suspended in alcohol, or from tetraethyl tin and mercuric chloride dissolved in alcohol. In other examples methyl mercuric chloride is made from mercuric chloride dissolved or suspended in alcohol and tetramethyl lead; phenyl mercuric chloride is produced from tetraphenyl lead dissolved in benzene and mercuric chloride, from tetraphenyl tin and mercuric chloride in alcohol; ethyl mercury acetate is produced from tetraethyl tin and mercury acetate in glacial acetic acid. Cyclohexyl mercuric acetate is produced interacting mercury acetate dissolved in glacial acetic acid and tetracyclohexyl lead. Benzyl mercuric acetate is produced from mercuric acetate dissolved in glacial acetic acid and tetrabenzyl tin. Instead of tetra-alkyl lead in the process, the product which is obtained by the interaction of sodium-lead alloy, preferably of the composition $PbNa_2$, and an alkyl sulphate, may be employed. Examples are given in which the sodium-lead alloy is boiled under a reflux condenser with toluene and decyl sulphate and without further isolation of the tetraethyl lead, is reacted with mercuric chloride dissolved in acetone. Alternatively the mercuric chloride may be placed in an extraction thimble and a small quantity of acetone is added to the reaction mass, which is finally boiled. The condensed vapor drops back through the thimble and carries some of the mercuric chloride with it. E. I. duPont de Nemours & Co., Wilmington, Del. B. P. No. 331,494, filed Jan. 21, 1929.

Bottle Closures

The closure is provided with a detachable stopper secured by clamping devices. A closure for bottles accordingly consists of a plug and an eccentric locking cap which is rotated relatively to the plug on a guide ring to lock the plug. This cap may be secured to the ring by means of a pin and slot device of by an

upwardly turned rim and the ring may be integral with or secured to the bottle. J. Hagel, Alt-Kabelberg, near Gmuend, Austria. B. P. No. 331,887, filed April 11, 1929.

Intermediates for Medicinal Agents

Imino-ethers are made by allowing hydrazoic acid to act on carbonyl compounds in the presence of catalytic agents, such as mineral acids, phosphorus pentoxide, phosphorus trichloride, or phosphorus oxytrichloride, zinc chloride, or thionyl chloride and alcohols. For example cyclopentanone, which is mixed with hydrazoic acid in benzene, is heated with alcoholic hydrochloric acid or sulphuric acid or the dry acid gas is passed into the alcoholic mixture. Acetone may be used in a similar process. Cyclohexanone, which is mixed with hydrozoic acid in benzene solution, is added to normal butyl alcohol saturated with hydrochloric acid or to anhydrous zinc chloride and normal butyl alchohol. Pentamethylenetetrazole is obtained as a by-product in this reaction. Cyclohexanone is mixed with benzene, hydrazoic acid and alcohol and thionyl chloride or phosphorus oxytrichloride are added. Leucinelactam is obtained as a by-product. K. F. Schmidt and P. Zutavern, Ludwigshafen-on-the-Rhine, Germany. B. P. No. 331,947, filed April 19, 1929.

New Dentifrice

A tooth powder consists of powdered zeolite which is mixed with other materials generally employed in the manufacture of tooth powders. For example calcium carbonate, magnesium carbonate or powdered soap may be added. An example describes a tooth powder which is made from a mixture of zeolite, precipitated chalk (carbonate of lime) and magnesium carbonate and a small amount of oil of peppermint and an aromatic substance. M. Ogawa, Kameido-Machi, Minamikatsushika-Gun, Tokio-Fu, Japan. B. P. No. 332,142, filed October 8, 1929.

Veterinary Medicines

A remedy for hypodermic injection into cattle for the treatment of contagious abortion, rheumatism and debility consists of lysol, liniment of iodine and turpentine. T. Leahy, Zlthea, County Limerick, Ireland. B. P. No. 332,464, filed September 26, 1929.

Bismuth Hydroxide

Bismuth hydroxide is obtained in the finely divided state by precipitating an aqueous solution of a bismuth salt by means of an alkali, for example aqua ammonia, and then removing the adhering water from the filtered precipitate by first washing with a solvent which is more volatile and soluble in water, then washing with a second volatile solvent and finally evaporating the second solvent. Examples of the first solvent are alcohol, methanol or acetone, and as second solvent ether, ethyl chloride or chloroform may be used. The finely divided dry bismuth hydroxide, when suspended in may be used in the treatment of syphilis. I. G. Farbenindustrie A. G., Frankfurt-on-Main, Germany. B. P. No. 332,504, filed Nov. 30, 1929.

Antiseptic Liquids

An antiseptic liquid is prepared by saturating a solution in water or sodium or other alkali metal hypochlorite with ozone which has been produced electrolytically. A suitable electrolytic apparatus consists of a glass cell with two electrodes passing through the side of the cell and supported by a suitable insulator. The anode is a platinum wire and has a small surface area as compared with the cathode, a rod of graphite, so that a high anode current density with the consequent production of ozone is obtained. An electrolyte valve with which a transformer may be incorporated is provided for use with an alternating current supply. A cook for emptying the cell and a thermometer are also provided. The electrolyte may consist of a solution of sodium chloride only of various alkali metal chloride or it may contain other salts such as phosphates, sulphates, etc. The maximum temperature of operation should not exceed 40° C., but if it is desired that the resultant liquid includes chlorates, the temperature should exceed 50° C. S. Pansini, Orthez, Basse Pyrenees, France. B. P. No. 332,820, filed November 17, 1929.

Metal Carbamates

Metal carbamates are made by reacting upon a solution or suspension of a metallic compound in an inert liquid solvent with ammonium carbamate. Suitable solvents are alcohol, methanol, or other alcohols, formamide, or liquid ammonia which may contain ammonium nitrate or a small proportion of water. Sodium chloride calcium chloride, or potassium compounds may be treated to form the corresponding carbamates. I. G. Farbenindustrie A. G., Frankfurt-on-Main, Germany. B. P. No. 332,584, filed March 20, 1929.

GERMAN PATENTS

Perfume Mixtures

Tetra-hydro-ionone, obtained by the hydrogenation of ionone, possesses an odor like the original substance, but one which is not more valuable from the technical standpoint. Various known aldehydes of the ionone series also possess odors which are similar to that of ionone but these substances are unstable. A new product has been obtained or rather a series of products. The original product is 2-oxo-2-alkyl-butylcyclohexane and derivatives are obtained from this. A surprisingly new odor is the chief characteristic of these substances. This odor is altogether different from that of ionone. This fact makes these substances valuable in the preparation of flower oils. A number of these substances are described in the patent. They are used in the preparation of fancy perfume compositions, a flower oil base, a lily of the valley perfume for use in making soaps, jasmine oil, iris oil, and linden flower oil.

For example the lily of the valley perfume preparation consists of 7 parts of 4-oxo-3-methobutyl-cyclohexane, 30 parts of linaloa oil, 20 parts of hydroxycitronellal, 10 parts of cananaga oil, 3 parts of benzaldehyde, 20 parts of terpineol, and 10 parts of benzyl acetate. The flower oil base consists of 6 parts of 1:1:3-trimethyl-2-2-2-oxo-2-ethylbutyl-cyclohexane, 35 parts of hydroxycitronellal, 26 parts of benzyl alcohol, 10 parts of benzyl acetate, the same proportions of phenyl ethyl alcohol and cinnamic alcohol and 3 parts of ylang-ylang oil. Iris oil consists of 28 parts of 3:4:6-trimethyl derivative, as above, 30 parts of methyl-ionone, one part of laurinaldehyde, 7 parts of eugenol, 33 parts of myristinic acid and one part of methyl heptine-carbonate. I. G. Farbenindustrie A. G., Frankfurt-on-Main, Germany. G. P. No. 501,627, filed June 19, 1929.

Dissolving and Fixing Perfumes

Dicarboxylic acids are obtained by oxidation of partially hydrogenated naphthalenes, which contain a completely hydrogenated chain. Compounds of like nature are obtained by the oxidation of hydronaphthols and hydronaphthones. It has been found that the esters of the acids formed in the oxidation which are separable by crystallization with aliphatic, aromatic or alicyclic alcohols, are highly useful for fixation of perfumes. These products possess high boiling points and are able to fix volatile odors when the fixatives are used in very small amounts. The latter do not possess any distinctive odor of their own, which is again a marked advantage.

For example 4,150 grams of 50% concentrated nitric acid is heated to 40° to 50° C. after the addition of 0.02 to 0.03% ammonium vanadate and then mixed drop by drop with 800 grams of liquefied beta-dekahydronaphthol. The oxidation of the latter takes place very vigorously, so that care must be taken to see that the temperature of reaction does not exceed 60° to 80° C. After the reaction has been completed, 420 grams of cyclohexane-diacetic acid separate out on cooling and this substance can be obtained in pure condition by recrystallization from water. On the other hand 530 grams of an organic acid can be obtained by evaporation of the oxidation solution Deutsche Hydrierwerke A. G., Rodleben, near Rosslau, Anhalt, Germany. G. P. No. 505,814, filed June 24, 1926.

The Literature Says:-

Rapid Determination of Phenolphthalein in Laxatives

The method varies according to whether the laxative contains agar-agar or not. The principle of the method depends on the insolubility of the phenolphthalein in water and the exhaustive extraction of the insoluble matter with alcohol, with the result that all of the phenolphthalein goes into solution. The analysis is as follows in the case where the laxative contains ager-agar. This is the more complicated method.

The agar-agar is present make the filtration difficult. This means that more time is spent in the analysis and furthermore more phenolphthalein is lost. The sample is carefully weighed. It is then decomposed with the aid of approximately 50 cc. of distilled water and 2 cc. of concentrated hydrochloric acid, density 1.19, in a small Erlenmeyer flask. After the mixture has been brought up to a boil, and the tablet has been completely disintegrated, the mixture is allowed to settle and then filtered in the hot condition at a temperature of 80° C. through two filters, one overhanging the other. The phenolphthalein which adheres to the walls of the small flask is washed down with a small quantity of water. Quantative washing out of the flask is not necessary.

Then the contents of the two filters are washed with hot water at not over 80° C. until the wash water no longer gives a test for chlorine with silver nitrate. The quantity of filtrate and wash water, which should amount to approximately 100 cc. is determined in a measuring flask. Then the contents of the two filters are first digested with hot absolute alcohol and then with 95% concentrated alcohol in an Erlenmeyer flask, which has been accurately weighed, for such a time, until a drop of the filtrate, brought into contact with the alkalinized water, gives no reaction or only an extremely weak pink color. The flask with the alcoholic solution of phenolphthalein is distilled and evaporated down to drying on a glycerin bath. The alcohol is heated not so that it boils vigorously, for too rapid evaporation of the liquor will result in unavoidable losses of phenolphthalein. Then the residue is dried, approximately 30 minutes after the evaporation to dryness has been completed, in a drying chamber at a temperature of 105° C. The dried mass is cooled in a dessicator and weighed. The amount of phenolphathlein present can then be calculated. G. Rosenberger, Chemiker Zeitung, 1930, page 345.

Stability of Hydrogen Peroxide in Storage

A study has been made of the stability of hydrogen peroxide in 30% concentration and also in 3% concentration. It was found that the different makes vary considerably in keeping qualities. Tests were made on them with the aid of the mercury arc light. It was found however that the stability of the average commercial product is satisfactory. H. H. Willrath, Chemiker Zeitung, 1930, page 51.

Turpentine Oil From Pinus Jeffreyi

Steam distillation process was used to obtain oil of turpentine from the turpentine of Pinus Jeffryi. A yield was obtained of 8% of an oil of density 0.7016 at 15° C.; saponification number of zero; ester number of 2.8; ester number after acetylation of 4.7; boiling range 98° to 100° C. (38%), 100° to 102° C., (34%), 102° to 105° C. (11%), 105° to 120° (6%). The oil is soluble in six volumes and more of 90% alcohol. The residue after distillation of the oil is 11%. Berichte Schimmel, 1930, page 88.

Germicidal Action of Sulphocyanides

This investigation was concerned with the germicidal action of hydrosulphocyanic acid and of sodium sulphocyanide in neutral and in acid solutions. It was determined that the disinfectant action of sodium sulphocyanide was considerably stronger than that of other sodium halogenides. This activity attains an extraordinary acceleration by hydrogen ions, as was indicated by investigations made with various strongly and weakly dissociated acids. The increase in the activity amounts to 256 to 2,048 fold. Free hydrosulphocyanid acid acts many times more strongly than hydrochloric acid and in fact exceeds the activity of trichloroacetic acid. Vegetative bacteria are killed with the aid of an aqueous solution of 0.2 gram of potassium bisulphate and 0.4 gram of sodium sulphocyanide in one hundred cubic centimeters within fifteen seconds. The substance is also effective against resistant bacteria. G. Lockemann and W. Ulrich, Zeit. Hyg. Infekt. Krankh., volume 111, year 1930, pages 387-419.

Comparative Investigation of Chamomile

Various types of Hungarian chamomiles were investigated and it was found that the better types contained 0.6% of essential oil while the poorer types contained 0.4%. The ash and sand content was 10% in poor grades and 0.8% in better grades. So-called German chamomiles contained 9 and 0.5% of ash and sand and Russian chamomile 11 and 2.7%. P. Rom, Magyar Gyogyszeresztudomanyi Tarsasag Ertesitoeje, volume 6, 1930, pages 296-9.

Tincture of Iodine

Formation in tincture of iodine of ethyl iodide and hydriodic acid independent of the action of light takes place as well with 85% concentrated alcohol in similar manner, but it is prevented by the addition of potassium iodide in the proportion of at least 2.5% for a tincture containing 6.5% of iodine. Investigation was made of tincture of iodine prepared from alcohol, denaturated with 5% methanol, 25% acetone, half a per cent. of petroleum and traces of coloring matter. It was found that the formation of hydriodic acid in such a tincture was very fast. Furthermore, organic iodine compounds were also formed, particularly monoiodoacetone. G. Panopoulos and J. Megaloikonomos. Extrait Praktika de l'Academie d'Athens, volume 2, pages 15.

Stability of Salts of Ergotoxin and Ergotamin

Ergotoxin phosphate loses yearly about 10% of its specific physiological activity, even when kept in a vacuum over phosphorus pentoxide. The loss in activity is greater when air comes into contact with it. Ergotoxin ethylsulphonate is a more stable substance and the yearly loss in the activity is only 5%. Phosphate is much more unstable in aqueous solution than in the dry state. An aqueous solution, containing 0.01% of phosphate, was found to lose as much as 50% activity when kept for six months in an ice box. More concentrated solutions decomposed at the beginning still faster. The reduction in activity takes place more rapidly 37° C. Commercial preparations and ampulles, which contain aqueous solutions of the phosphate of ergotoxin and the tartrate of ergotamin in concentrations of 0.05 to 0.1%, lose half of their activity in the first six months. Quarterly Journal Pharmac. Pharmacol., volume 3, 59-62, year 1930.

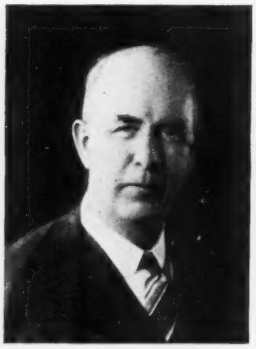
(Continued on page 471)

Abbott Buys Swan-Myers

Announcement is made of the approval by the Board of Directors and stockholders of Abbott Laboratories, North Chicago, and Swan-Myers Co., Indianapolis, of a combine of the two firms to become effective November 1.

R. M. Cain, President of Swan-Myers Co. has been elected Vice-President and Director of the Abbot Laboratories, in charge of sales. Dr. Frank B. Kirby continues as sales manager.

The following changes will become effective at once. S. DeWitt Clough, secretary and director of the Abbott Laboratories has



Dr. Alfred S. Burdick

Rolley M. Cain

been elected Vice-President and Director; James F. Stiles, former comptroller of the Abbott Laboratories, has been elected Treasurer and Director, to fill the vacancy caused by the resignation of C. O. Brown.

E. H. Volwiler, chief chemist of the Abbott Laboratories and E. L. Drach, purchasing agent, have also been elected directors following the retirement of H. B. Shattuck and James W. Ranson, former vice-presidents.

F. W. Scheigert, former secretary-treasurer of Swan-Myers Co., has been elected secretary and director of the Abbot Laboratories.

Among the executives of Swan-Myers Co. who will join the Abbott management are Edgar B. Carter, director of the biological laboratories; A. E. Snyder, sales manager; C. R. Jackson, advertising manager; Rolando Anglada, export manager; O. C. Durham, botanist, and a great many others of the Swan-Myers staff.

When interviewed, R. M. Cain stated that the Swan-Myers laboratories will continue to operate in Indianapolis and that the production of the special pharmaceutical and biological products will be continued under the Swan-Myers label in the combined companies. O. H. Myers, vice-president of Swan-Myers Co. will remain in Indianapolis.

The New York branches of Swan-Myers Co. and the Abbott Laboratories will be consolidated and will be in charge of E. L. Shattuck, manager of the eastern branch of the Abbott Laboratories.

The purpose of the combination is to enlarge the research facilities, sales organizations and distribution outlets of both companies. Alfred S. Burdick states that with the added volume of sales and the economies in administration and manufacturing which can be effected, the earnings of the Abbott Laboratories for 1931 should be increased.

Lambert Co., for the three months ended Sept. 30, report consolidated net profits, based upon ownership of 95.8 per cent. of stock of Lambert Pharmacal Co. and including Pro-phy-lac-tic Brush Co., acquired this year, of $1,904,121, equal to $2.54 a share on capital stock, compared with $1,959,106, or $2.61 a share, computed on same share basis, last year. Nine months' net profits, $5,668,471, or $7.56 a share, compared with $5,768,568, or $7.70 a share, on same share basis, last year.

W. H. Dow Succeeds Father

Willard H. Dow was unanimously elected as president of the Dow Chemical Co. to succeed his father, the late Dr. Herbert H. Dow, whose chief assistant he had been since 1925 when he was designated assistant general manager and assistant treasurer.

Willard H. Dow is thirty-three years old and holds a B. Sc. degree from the University of Michigan. His first regular job was with the Dow organization and he has worked through many of the departments in the plant. In September of 1921 he was married to Miss Martha Pratt of Midland.

Owens Buys Atlantic

Owens-Illinois Glass Co., Toledo, have contracted to purchase the manufacturing assets of the Atlantic Bottle Co., New York milk bottle manufacturers. It is expected that the final details of the acquisition will be completed about Nov. 15. The Atlantic Bottle Co. has had a long record of successful operation, and, while its annual production is not large, its product is well established, particularly in the Eastern markets.

American Commercial Loses

American Commercial Alcohol Corp. report for the there months ended Sept. 30, net loss after charges and taxes, of $105,745, against a net profit of $369,807, or 95c a share, on the capital stock last year. Nine months earnings equaled $70,186, or 18c a share, compared with $925,464, or $2.37 a share, last year.

Sharp & Dohme Quarter

Sharp & Dohme, Inc., report for the three months ended Sept. 30, net profit after depreciation, Federal taxes and other charges, $350,038, equal after preferred dividends to 19c a share on the common stock. Nine months earnings is equal to $964,364, or 46c a share.

J. W. Boyer Leaves Monsanto

John W. Boyer tendered his resignation as vice-president of Monsanto Chemical Works and it was accepted with regret by the Board of Directors, effective November 1, 1930. G. Lee Camp was elected vice-president in charge of sales.

Ungerer & Co., essential oils, have appointed Walter S. Goff as assistant to Harry J. Ahles, manager of their Chicago office at 350 North Clark st. Mr. Goff will materially increase the facilities of Ungerer & Co.'s Chicago office in handling the business in that territory.

The Harshaw Chemical Co. announces the opening of its Detroit offices, with R. R. Davies in charge, at Central Detroit Warehouse, Fort at 10th st., Detroit, Michigan. Telephone Cadillac 0444.

Corydon M. Grafton has resigned from the du Pont Co., Buffalo plant, to take a position with Foster Dee Snell, consulting chemist.

Connect *your* distant Offices by Telephone Typewriter Service

TELEPHONE TYPEWRITER SERVICE speeds business and cuts operating costs. It transmits typewritten messages instantly between the separated divisions of an organization. It is quick, accurate and handles an unlimited flow of incoming and outgoing messages in a single business day. Orders are reproduced identically on duplicate printed forms. Inquiries are answered from a distant city the minute they arise. Routine is simplified and expensive duplication of operations eliminated.

A textile company has headquarters in Boston, sales offices in New York, a manufacturing plant at Biddeford, Maine, and a bleachery at Lewiston, Maine. Telephone Typewriter Service ties together the operation of all these units. An official writes: "Many transactions can be cleaned up on the same day that they arise, even if they concern several offices. A saving of 48 hours or more in the handling of orders is frequently effected."

A public service corporation uses Telephone Typewriter Service to connect its offices in three cities. General information and executive messages are exchanged.

Your local Bell Telephone Business Office will gladly show you how this modern business aid can be of value to your company.

The New York office of the International Nickel Co., maintains constant contact with factories at Huntington, W Va.

Nine outlying plants are connected with the Chicago office of the American Can Company by telephone typewriters.

The Kelly-Springfield Tire Company uses telephone typewriter service between New York and Cumberland, Md.

Drug Industry Stocks

1930 Oct. 31 Bid	1930 Oct. 31 Asked	1930 High	1930 Low	1929 High	1929 Low	ISSUES	Par $	Shares Listed (000 Omit.)	Earnings per share An. Rate		Earnings per share 1929
						NEW YORK STOCK EXCHANGE					
113⅜	113⅞	156½	108½	184½	86	American Can	25	2,474	$4.00	†	6.86
148½	149	150⅝	140½	145	133½	pfd	100	412	7.00	†	48.17
12⅝	13	33	9¼	55	20	American Com'l Alcohol	No	382	1.60	*	2.59
52½	53	69¾	49½	85⅛	40	American Home Products	No	611	4.20	‡	2.67
4¾	5¼	22½	3½	...	...	American Solvents & Chem. Co.	No	...	...		...
9	10	33½	11½	...	...	pfd	No	...	...		...
51½	51⅞	64¼	49	...	...	Colgate-Palmolive-Peet Com	No	1,999,970	...		...
103½	104	103½	97	...	...	6% pfd	100	151,449	...		...
14⅞	15	22½	11⅝	23½	12	Container Corp. Class A	20	279	1.20	*	1.23
3⅜	3⅞	8½	3¾	11½	3⅛	Container Corp. Class B	No	588	...	*	0.14
12	12¼	33	10	82½	18	Coty, Inc	No	1,493	2.00	*	2.46
70⅜	71	87⅜	67	126⅜	69	Drug Incorporated	No	2,941,776	4.00	†	3.10
65½	66	68¼	49	79½	40	House Hold Products	No	575	3.50	‡	2.64
83½	84	113	76½	157½	80½	Lambert Co	No	699	8.20	*	7.79
27	28	36	21	68½	28	Lehn & Fink	No	419	3.20	‡	2.20
12	12½	37⅜	10⅛	59	21¼	McKesson & Robbins. Com	No	1,911	2.00	‡	1.50
29½	30	49½	25½	63	40	pfd	50	421	3.50	‡	5.13
25½	26	63½	23	80½	47	Monsanto Chemical Co	No	398	1.25	*	4.44
36½	37¼	60¼	36½	87½	43	Owens-Illinois Glass Co	25	827	...	*	4.04
...	35	60½	31	...	...	Peoples Drug Store	No	...	...		...
17½	18	27⅛	16	65⅞	50	Sharp & Dohme	...	...	...		...
56½	58	63½	54	65½	50	Sharp & Dohme pfd	No	777	...	a	0.88
63	63½	139¾	58½	243⅜	67	U. S. Ind. Alc	No	373	6.00	‡	5.30
...	...	...	...	...	...	pfd	...	...	...		...
21	25	7⅛	⅛	13½	3	Vadsco Sales	No	971	...	*c	0.86
						NEW YORK CURB					
⅛	¼	1⅛	⅛	7½	⅜	Allison Drug Stores Class A	No	70	...	e	...
⅛	¼	⅛	⅛	5⅜	⅛	Allison Drug Stores Class B	No	95	...	e	...
100	120	184⅞	140½	210	130	Ches. Mfg. Co	25	120	4.20	†	8.49
⅛	⅜	1	⅜	57½	2	Davis Drug Stores Allot. Ctfs	...	...	...		...
3¼	4¼	7⅜	1⅞	26½	3½	Helena Rubenstein	No	289	...	‡	1.13
12	20	23	11½	41½	17⅜	Heyden Chemical Corp	...	150	...	†	2.02
...	...	7⅜	6½	24⅜	6½	International Perfume Com	No	392	1.00	g	1.02
...	...	71	67	...	...	$6 Cum. Pfd	No	61	2.75	g	8.81
...	...	...	...	...	...	Mead-Johnson	No	165	3.00	‡	3.30
74½	75¼	90	55½	67¾	40	Nauheim Pharmacies Com	No	97	...	*	Nil
1½	2	2½	1½	12	1½	pfd	No	45	...	*	0.71
1¼	4½	6¾	2¼	32⅜	2	Neve Drug Stores, Com	No	170	...	h	...
18	18½	42	16½	52	21½	Newport Co., Com	No	405	2.00	*	2.18
30	30	38	30	46½	29½	Northam Warren Corp. Pfd	No	50	3.00	g	10.35
30	30	42½	30	58¾	40½	Parke Davis & Co	No	4,770	1.00	†	1.73
5	5½	23½	4½	34	10½	Stein Cosmetics, Com	No	60	...	i	...
6½	6¾	9¼	6¼	18	6⅜	Vick Financial Corp	10	750	...	j	...
24½	25	61	23	107½	35½	Walgreen Co., Com	No	834	...	‡	1.63
8	8½	21½	8	44⅜	13	Zonite Products Corp	No	176	1.60	*	1.31
						CLEVELAND					
48	55	100	48	80	60	Dow Chem. Co	...	...	...	..	...
106	106	106½	103	...	...	pfd	No	25	1.60	..	...
24½	24½	32½	22	42	20	Miller Wholesale Drug Com	...	...	...	..	...
15	17	22½	14	51	34	Weinberger Drug Com	No	30	2.00	..	...
						CHICAGO					
40	40	46¾	35	52	36	Abbott Laboratories	No	120	2.00	†	3.86
18	19	42½	18	73	28¾	Katz Drug Co., Com	100	100	2.00	..	...
1	1	6	1	29½	2	Lane Drug Co., Com VTC	No	95	...	g	0.92
1	1	15	1	32	14	Cum. pfd	No	65	2.00	g	3.00
						CINCINNATI					
11	11	18	10	41½	16	Dow Drug Co	No	90	1.00	..	...
...	...	107	100	125	102	pfd	100	400	7.00	..	...
...	...	...	...	...	...	Standard Drug A	...	...	...	..	...
						BALTIMORE					
31	31	33½	30	39¼	25	Emerson's Bromo Seltzer	No	56	2.00	..	...
						UNLISTED					
...	...	...	...	...	...	Heyden Chemical Corp. pfd	...	...	...	..	...
77	82	...	...	...	...	Merck pfd	...	...	...	..	...
...	...	...	...	...	...	Noxzema Chem. Co	...	...	...	..	...
...	...	...	...	...	...	Squibb Com	...	...	...	..	...
...	...	...	...	...	...	pfd	...	...	...	..	...

† Yr. Dec. 31, '28.
* 9 mos. Sp. 30, '29.
‡ 6 mo Je, 30, '29.
a 8 mos. Au. 31, '29.
b 3 mos. Sp. 30, '29
c Before Fed. Tax.
d Yr. Je. 30, '29.
e None Reported.
f Incorporated in April, 1929
g 10 mos. Oct. 31, '29.
h Controlled by United Cigar Stores
i Incorporated in Dec., 1928.
j Affil. with Vick Chem. Co.

Vick Financial Corp. for the nine months ended Sept. 30, showed a net profit of $373,315 after loss on sale of securities equivalent to 31c a share on 1,216,995 shares; loss from sale of securities, $15,395; interest and dividends received, $494,281.

Hazel-Atlas Glass Co. showed a net profit for the three months ended Sept. 30, of $529,332. This is after interest, depreciation, depletion and taxes, and is equal to $1.22 a share on the capital stock, compared with $753,434, or $1.90 a share, last year.

Drug Stocks Still Low

Although some improvement in the prices of common stocks of drug and cosmetic companies was seen in the last week of October, the index of the Standard Statistics Company, of New York, showed a decided drop in the week, ending November 5, though remaining 1.4 points above the year's low. Prices of the stocks of 337 miscellaneous industries declined to a new low, for the week ending November 5, discounting the improvement of the previous week. Detailed figures on both indexes follow:

	1926 equals 100	
	Drugs and Cosmetics	*337 Industrials*
Oct. 8	131.1	120.4
15	129.1	118.3
22	125.5	109.9
29	131.6	113.8
Nov. 5	126.9	108.4
1930 High	174.7	174.1
Low	125.5	108.4
1929 High	260.6	218.9
Low	158.8	134.5

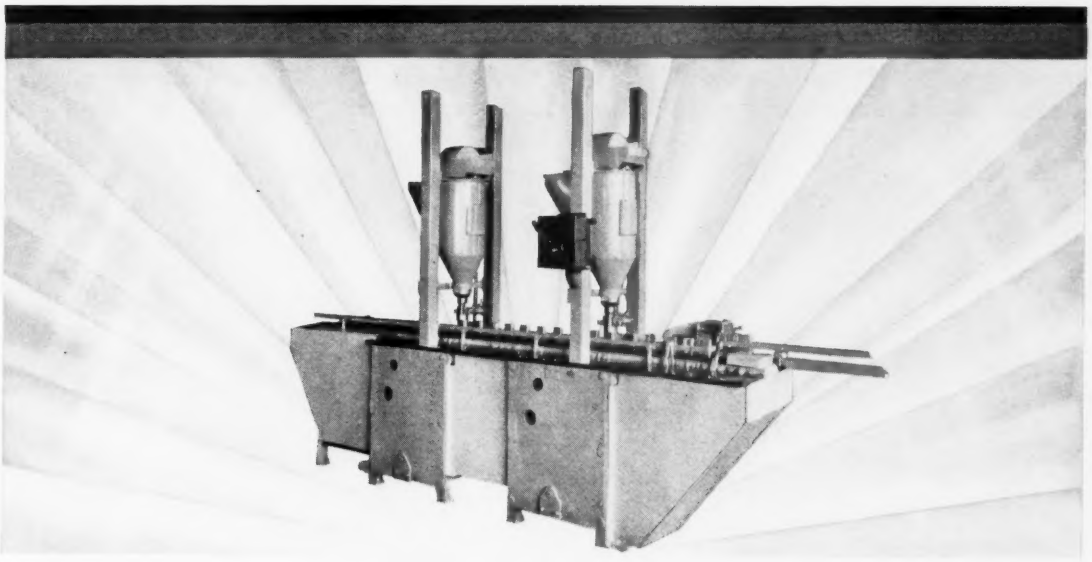
Vadsco Sales Corp. and subsidiaries report for the three months ended Sept. 30, profit after charges, including depreciation, but before Federal taxes, of $28,062, compared with $360,384 last year. For the nine months they report net loss, of $96,520, compared with profit, before Federal taxes, of $1,278,927 last year.

People's Drug Stores, Inc., for October, report sales of $1,392,949, compared with $1,368,846 last year, an increase of one and seven-tenths per cent. Ten months: $13,668,298, compared with $12,411,174 last year, an increase of 10.1 per cent.

Newport Co. and subsidiaries report for the nine months ended Sept. 30, net income after expense, depreciation and Federal taxes, of $814,655, equal after Class A dividends to $1.42 a share on the common stock, compared with $1,173,953, or $2.10 a share, computed on the same share basis last year.

The Board of Directors of Drug Inc., on November 5, declared a regular quarterly dividend of $1 per share payable December 1, 1930 to stockholders of record November 14.

Lehn & Fink Products Co. report that earnings for the nine months ended Sept. 30, 1930, were sufficient to cover the entire year's dividend on outstanding stock. The company has outstanding 419,166 shares of common stock, no par value, on which the annual dividend rate is $3 per share, so that the full year's dividend requirements would be $1,257,498. Earnings in the first six months of 1930 were $918,383, equal to $2.19 a share, against $923,116, or $2.20 a share, in the first six months of 1929.



From can making to can capping

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THE Stokes & Smith improved auger feed Filling Machine is so completely automatic that although we recommend an attendant for the machine, in one of our customer's plants a single attendant operates another machine while merely keeping an eye on this one.

An automatic container feed takes the containers as they are made and deposits them 2 at a time on the positive chain conveyor of the Filling Machine. The containers are then carried, one to each filling station and filled at the rate of 30 per minute per filling station or 60 a minute per machine. Each filling station has an automatic trip so that if there is no container under the station there is no fill.

Especially suited for filling any kind of powdered materials, this machine, with a slight adjustment, will handle with equal speed and accuracy non-flowing pastes and creams. So accurate is the improved auger feed that on a recent installation filling 1½ and 2-oz. cans, the weight was correct to within 1/32nd of an ounce.

Special shear pins, which shear off in case of jams, prevent any further damage to the machine. All that is necessary to put the machine back to work is the replacement of a small pin.

If you will write to us we shall be glad to furnish full details about this new high-speed precision built machine; or about the well-known single unit Universal Machine for hand filling which is very extensively used for powders, pastes and similar products.

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How long since you took stock of your perfumed products? Are you looking for an improved odor? Or do you think you could use a new one?

Here are a few suggestions.

Amber S
$28.00 lb.
A solid completely soluble in alcohol. Used in connection with powder and other oils, it gives heavy, lasting sweet effects.

Bouquet Eve
$150.00 lb. $80.00 lb.
64.00 lb. 40.00 lb.
30.00 lb. 24.00 lb.
Favorite for perfumes and powders, where its distinctive odor shows to great advantage. The oil is very strong and lasting. The different qualities will meet almost any price demand.

Bouquet C 5
$80.00 lb. $54.00 lb.
33.00 lb. 16.50 lb.
A complete line of oils of this popular imported style. For all perfume and cosmetic uses.

Bouquet C 22
$54.00 lb. $24.00 lb.
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For powder, perfume, cream; in fact, a complete line. One of the most sought-after, modern French types.

Gardenia R 107
$16.00 lb.
Lower-priced version of the French type Gardenia. For every perfuming purpose.

Jasmin Diaphol
$78.00 lb.
So close to fine natural jasmin, that it is generally used 50-50 with natural.

Jasmin Alva
$28.00 lb.
For five years a leader in its field, used alone in creams, perfumes, toilet waters, and in hundreds of bouquet odors.

Jasmin H 9
$16.00 lb.
An excellent jasmin for creams. Flowery and true to natural jasmin types.

Jasmin 338
$10.00 lb.
A low priced oil for any use where the true jasmin odor is wanted. Non-discoloring.

Lilac Alva
$32.00 lb.
This is lilac-time. Compare Lilac Alva with a bunch of fresh lilacs.

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$16.00 lb.
Naturalness is the outstanding characteristic of this oil. For perfume, toilet water, lotions.

Lilac Buds
$8.00 lb.
For all-round usefulness this oil is especially recommended. Its price is favorable.

Neither you nor we are in business for today only. Everybody in our organization realizes that --- and we work accordingly.

Haebler, Inc.

Lily Petals D $24.00 lb.	Like the finest imported lily oils, this is ideal for cream and all other perfumed products.
Locust 714 $9.00 lb.	Cream odors are in great demand. This locust is well adapted for the purpose, in odor and price.
Locust Blossom D $5.00 lb.	One of the most advantageous cream odors—flowery, pleasing, and priced extremely low.
Opoponax S. S. $24.00 lb.	This type of oil is used as a base by many Parisian perfumers. Fine perfume and powder odors can be built on it. Not intended to be used alone, but can be.
Powder Oil D.L.S. $12.00 lb.	The lasting type that women are seeking. A lively odor too, with a good lift.
Rose $3.50 lb. and up	For all uses. Prices from $3.50 lb. to $150.00 lb. Excellent numbers at $6.00, $8.00, $12.00, $16.00, $24.00, $32.00.
Sharima $48.00 lb. $18.00 lb. 14.00 lb.	An odor of to-day, sweet, lasting and popular. Especially for powder and liquids, but also good in cream.
Sweet Pea C $28.00 lb.	Of the more flowery type, this oil is popular for use in perfumed preparations of all kinds.
Sweet Pea C 1 $18.00 lb.	Lower-priced, true to nature, sweet. Some perfumers have used it for years.
Violet R 204 $35.00 lb.	Extremely fine. Well suited to the highest class violet toilet waters and perfumes, and for blending.
Cream Odors $4.00 lb. and up	We offer a wide variety of excellent odors in every price range.
Bath Salt Odors $3.00 lb. and up	Some makers of bath salt prefer oil and color combined; others use them separately. We have both, in several grades.
Disinfectant and Insecticide Perfumes $1.00 lb. and up	Oils for fly-sprays, moth preventives, etc. Those for paradichlor benzene come either with or without color.
Powder Odors $4.00 lb. and up	Oils suitable for powder, costing $4.00 to $80.00 per lb. Large selections at $12.00 to $20.00 and $24.00 to $36.00.
Soap Odors $2.50 lb. and up	A large number of soap perfumes can be suggested, at convenient price levels.

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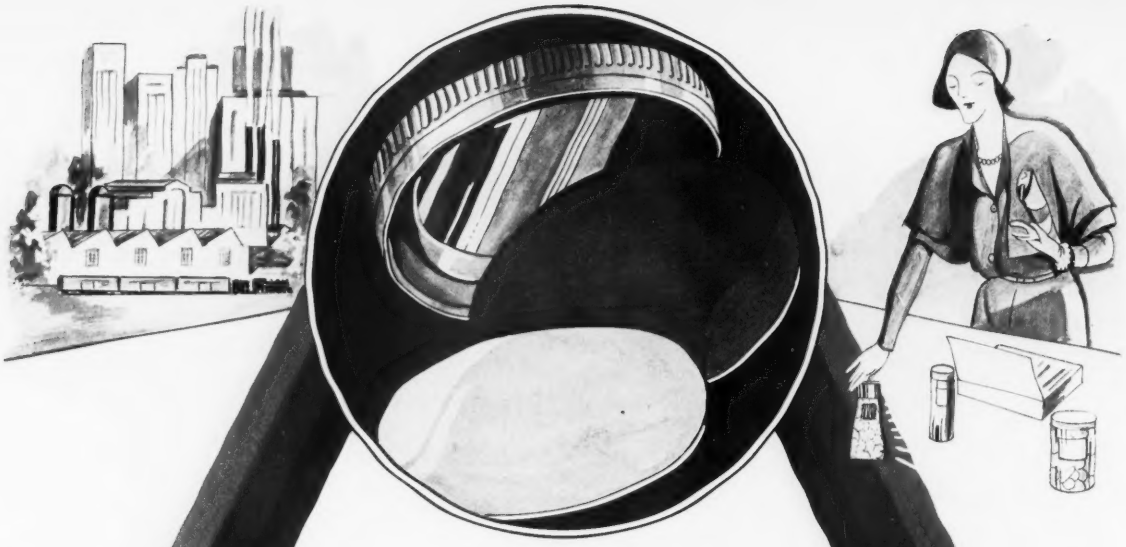

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IT IS worth a great deal to any packer to know that his product will reach the consumer in the same perfect condition as when it left the factory. Yet to obtain this assurance costs him nothing. It only requires care in the selection of liner materials--care that he use the right kind of liner for his particular product.

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Bulgarian rose distillery showing small alambics in the stills and workmen loading the stills

Rose Bulgarian for 1930

By G. Karaivanoff

IN ORDER to complete the article which appeared in the June and July issues of DRUG MARKETS on Rose Bulgarian, a statement will be given this month covering the rose yield in Bulgaria for the 1930 season, the amount of essential oil obtained, as well as the condition of the market at this time. The photographs illustrating this article were taken expressly for the readers of Drug Markets during the gathering and distilling periods of this year, and they will give an excellent idea of the activities in the so-called Valley of Roses, that picturesque section of Bulgaria that furnishes the world with the Bulgarian type of essential oil of rose.

It is interesting to note that the area of rose plantations in Bulgaria this year was greater than that registered last season. This increase in plantations was mostly to be found in the arrondissements, or

A field of roses in full flower in Bulgaria

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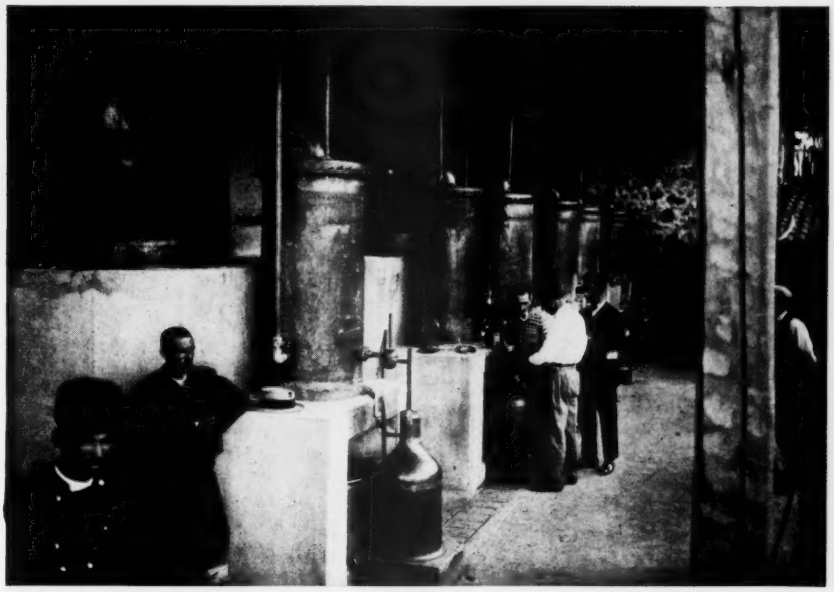

A modern Bulgarian co-operative rose distillery

districts, of Karlovo and Kazanlick. That this should be so is natural, for the reason that both of these regions have always taken the lead in the production of roses.

Some forty-five villages in the Karlovo arrondissement alone raised roses for the essential oil market, and the area represented was 4,310 hectares as compared with 3,505 in 1929. In the arrondissement of Kazanlick forty-one villages cultivated a surface of 1,367 hectares against 1,290 in 1929.

Taking the Valley of Roses as a whole, and which comprises no less than 103 villages, engaged in the cultivation of the rose, a total area of 6,967 hectares was represented this year as compared with 5,729 hectares the preceding year, namely an increase of 1,238 hectares.

According to the foregoing figures, it would, quite naturally, be thought that this year's yield outstripped that of last season. That is what the growers hoped, but the opposite occurred. Lamentable and deplorable climatic conditions had to be met during the flowering time, especially in the lower sections of the Valley of Roses. The result was, of course a deficient yield.

The culture of the Bulgarian type of rose is a very difficult undertaking, as the rose tree is very delicate when compared with other types of vegetation. From the time the plantation is established until each flowering, the grower, despite all the care exercised, is at the mercy of adverse weather conditions. All it requires to spoil a yield is a day too hot, or a sudden storm during the gathering time. And the result is a year's work for practically nothing, or just enough to cover expenses.

Everything looked favorable this year, and the growers had taken all precautions, but with the coming of bad climatic changes the entire situation was reversed in almost a day. In addition to the

Weighing roses in Bulgaria

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weather conditions, certain maladies to which the rose is subject set in during the flowering period.

This year's yield of flowers was slightly higher than that of 1929, but the yield in essential oil was below that of last year. There was, therefore, no compensating balance to be found in the increased area or larger yield of flowers.

The gathering period lasted a good month, starting the fifteenth of May and terminating about June 20. With the coming of the first days of May optimism reigned among the growers, and an abundant harvest was thought sure. This optimism was increased, when, during the first week of the gathering period, very favorable weather conditions set in. Satisfactory rains, with good atmospheric reactions, were the rule. Unfortunately, the following week the temperature rose brusquely, and during several consecutive days the weather remained hot and dry, without even any dew to speak of, and which helps a great deal in hastening the flowering period.

Plantations located on higher ground did not suffer much, and weather conditions there were such that the yield was practically normal.

The following table gives the production figures for this year's yield, specifying the quantities of red roses and white roses obtained in each region. As explained in the last article, the yield of oil from the white rose is approximately 50 per cent. below that of the red, and under these circumstances it seems strange, perhaps, that the peasant-growers should continue to raise the white variety. In this connection, it should be pointed out that the white rose is relative more robust than the red, and the yield per hectare is greater for the white variety. These considerations, naturally, keep the peasant-grower satisfied to the extent of raising a certain amount of white roses.

Arrondissement of	*This Year's Results* *Kilograms of flowers obtained* *Red*	*White*	*Total*
Karlovo	4,052,119	650,368	4,702,487
Kazanlick	800,130	566,416	1,366,545
Brezovo	911,620	279,000	1,190,620
Itara-Zagaro	18,857	5,822	24,679
Plovdiv			39,200
Total	5,782,726	1,501,605	7,323,531

It will be remembered that in 1929 the yield attained a weight of 7,121,900 kilograms of flowers, grown on a surface of 5,729 hectares, resulting in an average of 1,243 kilograms per hectare. This year, the area devoted to rose plantations having been 6,967 hectares, and the weight of the flowers obtained being 7,323,531 kilograms, the average yield per hectare was 1,036 kilograms. In fact, the yield in the lower sections went below that, whereas that in the higher districts went beyond the figure quoted, both of these conditions resulting in the final average figure, as stated, and which shows definitely that the yield for this year was less abundant than that of last season.

The 1930 yield was treated principally by the large distilleries and by the co-operatives, who operate alambics, or stills, of the open hearth type and also those utilizing steam. A certain number of small plantation proprietors treated their own flowers, but this type of grower-distiller is fast disappearing, giving way to the modern distillery.

In the arrondissement of Karlovo alone some thirty-one privately-owned distilleries treated 3,880,000 kilograms of flowers, followed by eleven co-operative distilleries, which treated 565,414 kilograms of flowers. Some thirty-eight privately owned distilleries in the arrondissement of Kazanlick treated 1,014,403 kilograms of flowers, and the eight co-operative distilleries in that district handled 351,278 kilograms of roses. In the arrondissement of Brezovo five privately owned distilleries treated 901,329 kilograms of flowers, and the five co-operative distilleries of the region handled 289,228 kilograms. All of the roses of the arrondissement of Itara-Zagora, namely 24,679 kilograms, were treated by the co-operatives. In the arrondissement Plovdiv there exist neither privately owned or co-operative distilleries as such, and all of the roses in that section, totalling 39,200 kilograms, were handled by the small growers themselves.

To summarize, during this season's yield 1,230,599 kilograms of flowers were distilled by the co-operatives, and 6,092,932 kilograms treated by privately owned distilleries and small growers themselves.

It is interesting to note that no flowers were treated by means of the volatile solvents method this year, with the result that no concrete was produced in Bulgaria this season. There exist 38 outfits equipped to produce under this category, and these belong to five distillers, who have their establishments in the arrondissement of Karlovo. These outfits were entirely abandoned this year, and the flowers treated only by distillation.

From all of the flowers treated this year there was obtained a stock of pure essential oil of rose amounting to 1,998 kilograms. In the majority of regions it required 3,800 to 4,000 kilograms of flowers to secure one kilogram of pure oil.

In the writer's own laboratory were carried out a number of analyses, based upon different samples of the pure oil from this year's yield, and it is with great pleasure that I give the results of these analyses to the readers of DRUG MARKETS:

	Density	*Index of Polarization*	*Refractive Index*	*Congealing Point °C*	*Acid Value*	*Ester Content*	*Index of Saponification*
Sample No. 1	0.853	−3.6	1.4588	19°C	3.73	12.13	15.86
Sample No. 2	0.8529	−3.5	1.4613	20.5°	3.73	7.47	11.20
Sample No. 3	0.854	−3.7	1.4616	21°	1.87	9.33	11.20
Sample No. 4	0.856	−2.6	1.4639	17.5°	1.87	9.30	11.20
Sample No. 5	0.854	−3.7	1.4609	18°	2.80	11.20	14.00
Sample No. 6	0.8548	−3.2	1.4619	18°	1.86	8.40	10.26
Sample No. 7	0.8558	−2.9	1.4614	20°	1.86	11.20	13.06
Sample No. 8	0.853	−2.8	1.4607	20°	0.96	10.73	11.66
Sample No. 9	0.853	−3.5	1.4585	19°	2.86	11.20	14.00

From the foregoing analyses it will be seen that the density of the samples examined varies between 0.8529 and 0.8558; the index of polarization, which is negative for rose oil, varies between −2.6 and −3.7; the refractive index falling between 1.4585 and 1.4639.

THE NEWPORT-RHODIA AROMATICS

for *ECONOMY*

Try this:

20 parts Rhodinol 1 SCUR

2 parts Hyacylene P SCUR

20 parts NEWPORT ROSE BOSPHORE

28 parts Phenyl Ethyl Alcohol

30 parts Pure Otto of Rose

and you have a beautiful "Otto of Rose" at about one-third the cost of the pure oil with a much greater lasting quality.

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Quite a marked difference shows up with respect to the congealing point of the various samples examined the table showing figures between 17°5 Centigrade and 21° Centigrade. The acid value falls between 0.96 and 3.73, with the ester content varying between 8.40 and 12.13, and the index of saponification 10.26 and 15.86.

This year the price paid the growers for roses was particularly high, since it attained the sum of 22 leva per kilogram of flowers (red), as compared with 20 leva last year. Furthermore, this year's price was not decided upon until after a long debate among the cultivators of the roses and the distilling perfumers.

The distillers' association tried its level best to secure a low price for the flowers, but when the price of 11 or 12 leva was proposed, the growers became incensed and would not even deliver any flowers. This attitude, therefore, kept the distilling perfumers from attaining their goal, namely that of obtaining flowers at a price that would allow them to place the essential oil on the world market at a figure that would stimulate the sale of Bulgarian rose oil.

When it looked as though the trouble would continue, some of the distilling perfumers, profiting by the confusion caused, offered prices way out of proportion. The final result was the establishment of the price of 22 leva per kilogram for the red flowers, which was higher than the price paid for roses in the south of France. In other words, the roses of Grasse were sold this season to the distilling perfumer for 3 francs 50 centimes (14 cents) per kilogram, which amounts to 19 leva in Bulgaria.

Prices of this kind, as everyone knows, high as they may seem, do not satisfy the grower, and he is threatening to plant kitchen vegetables of all kinds, rather than let himself in for a heavy loss each year. Furthermore, the distilling perfumers find that the pure oil obtained is too expensive, with the result that more and more synthetic perfumes are being used to replace the natural products.

It was pointed out above that it took about 4,000 kilograms of flowers this year to obtain a kilogram of pure essential of rose. To the price of the flowers must be added the expense of distillation, customs duties, transport, taxes, commissions, etc., etc., with the inevitable result that the price of pure oil is far too high. Taken all in all, the prices at the present are more firm than they were some time ago. Bulgarian oil is quoted at 108,000 to 124,200 leva, which represents $761 to $900 dollars per kilogram.

Exportation of Bulgarian rose oil for the first seven months of 1930 ran as follows:

Month	*Kilograms of Oil Exported*
January	102.234
February	82.894
March	23.200
April	95.560
May	11.467
June	815.845
July	126.631
Total	1,257.831 kilograms

Of the foregoing, 942.476 kilograms, representing June and July, were taken from yield of this year.

The Literature Says:-

(Continued from page 461)

Concentrated Solutions with Vitamin Action

These preparations are made from livers, particularly fresh livers and also from cod liver oil, by subjecting these substances to extraction with acid solvents. For example an acid alcohol, which has a hydrogen ion concentration of between 3.0 and 6.8, is used for this purpose. J. Wolf, Hamburg, Germany. G. P. No. 492,281, filed June 3, 1927.

Converting Water in Soluble Substances into Water-Soluble

This patent applies to the conversion of such water insoluble substances as resins, balsams, fatty oils and the like, into water-soluble form. The process of doing this consists in mixing with these substances as intimately as possible dry milk, which is free from dust. The balsam or resin or fat may first be dissolved in ether or some other suitable volatile solvent and then mixed with the dry milk. C. Schroeer, Berlin and A. Keil, Berlin-Halensee, Germany. G. P. No.492280, filed May 6, 1926.

Borneol from Nopinene

The nopinene is heated with organic acids to a temperature which does not exceed 135° C. The borneol is recovered from the reaction product according to the known methods. At the same time pinene is obtained and the acid is recovered. The recovery of the borneol involves the operations of saponification and steam distillation. Dr. G. Austerweil, Boulogne-sur-Seine, France. P. G. No. 492,509, filed June 24, 1926.

Investigation of Thallium Salts

This investigation was carried out on the thallium salts use for dermatological purposes. The occasion of the study was a case of poisoning with a dipilatory containing pure thallous acetate. Information in medical literature concerning this basic thallous acetate does not correspond with the facts. The iodide and the chlorplatinic methods give the best results in the determination of thallium, as determination as thallium sulphide does not always give correct results. The melting point of pure thallous acetate lies between 126° and 128° C., while according to the literature it should lie at 110° C. The active depilatory dose in the case of rabbits amounts to between 14 and 30 mg. per kilogram of the weight of the animal. Higher doses are lethal. Anales Soc. Espajola Fisica Quim., volume 28, year 1930, pages 728-741. J. M. Clavera and J. L. Guardiola.

Inactive Menthol

Inactive menthol is made from liquid isomenthol. The latter substance is mixed with sodium menthol or potassium menthol and the mixture is then heated to an elevated temperature. Rheinische Kampfer Fabrik G.m.b.H., Duesseldorf-Oberkassel, Germany. G. P. No. 493,268, filed March 12, 1922

Stable Luminescent Salves

These salves, pastes, powders, emulsions and the like contain phosphorescent substances, particularly phosphorus boride and phosphorus sulphides mixed with non-hydrophile bases. The phosphoresent compounds, which decompose easily, are mixed thoroughly with the salve bases, possessing non-hydrophile properties and are in this manner very effectively protected. Vaseline is for example used as a salve base. For example a bluish phosphoresent salve is prepared by mixing one hundred parts by weight of fat with fifty parts by weight of phosphorus boro-terephthalate. This salve is used for protecting the skin against sunburn. A yellowish phosphorescent salve is obtained by mixing one hundred parts by weight of vaseline with thirty parts by weight of zinc-cadmium (or copper) phosphide. Dr. E. Tiede, Berlin, Germany. G. P. No. 487,315, filed March 20, 1925.

(Continued on page 477)

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ITALIAN OLIVE OIL

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UNCO BRAND Olive Oil is produced and packed for us exclusively in the Riviera district of Northern Italy. In this section a happy conjunction of ideal soil and climatic conditions results in an oil of maximum blandness and excellent flavor, unmatched by the oils of the more Southernly districts of the country.

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UNCO BRAND oil is available in original 57 gallon drums or in 6 and 1 gallon cans, quart and pint cans, all shipped to the purchaser in the original Italian packages.

We recommend covering for your future Olive Oil requirements at this time, as prices are very low at present. Recent advices from Italy indicate advancing markets in the near future and the market has already reacted upward from its low point.

UNGERER & COMPANY

NEW YORK

Market Facts From Grasse

- Jasmine Production Off 40%
- Rose-geranium Unsettled
- Lavender Awaits Developments
- Rose Trees Condition Good

By O. C. Zilisch
Our Grasse Correspondent

THE jasmine situation of the Grasse region has been reported from month to month, and at the last meeting of the Perfumers' Syndicate of Grasse, held on October 17th, the price of 10 francs (40 cents) per kilogram, delivered, was confirmed. Flowers sold to commissionaires, or middlemen, brought 9 francs 25 centimes (37 cents) per kilogram. The difference of 75 centimes, or 3 cents, is absorbed by the commission of the middlemen and the transportation charges to the distilling perfumers' places of business.

Last year, as the trade will remember, the gathering time for jasmine terminated on October 10th, the usual date for this culture. This year, however, as already pointed out, the gathering period for much of the production of this season ended on September 15th. True, those under contract continued to October 10th, as usual, although the co-operatives terminated their gathering period with September 30th. Some of the growers, who are at the same time distilling perfumers, continued the gathering time beyond the October 10th limit. They could do this, as their particular plantations are under their direct supervision. In fact, some of the distilling perfumers have placed themselves in a decidedly independent position, and the small perfume-flower grower is left to seek his own outlets as he may.

Economic Situation Changed

This situation, as pointed out from time to time, has not brought about the best of feeling in the Grasse region, and a decided stand has been taken among many of the growers. The economic situation in Grasse and surrounding country has changed completely during the past few years, and some very definite developments may be predicted, unless a sudden change in tactics manifests itself, which is quite unlikely, from present indications, at least.

Latest figures received relative to the jasmine yield for this year point to the fact that the crop this year was about 40 per cent. below what is considered the normal. Whether conditions during the month of September were unfavorable, and to meet these conditions the price paid for flowers gathered after a rain was set at 6 francs (24 cents) per kilogram, delivered, and 5 francs 25 centimes (21 cents) per kilogram on the spot. It is, therefore, not very difficult to see what some of the growers lost when it is borne in mind that the gathering charges for jasmine run as high as 5 and 6 francs per kilogram. To tell the truth, a number of growers did not even make expenses, much less make a profit.

Among the distilling perfumers willing to express an opinion, it is thought that the next year, after stocks have been absorbed, will see a tendency upward in price on jasmine products. Just how long this upward reaction will take in making its appearance can not, of course, be fixed definitely at this time. That depends very greatly upon the absorption possibilities of the world market.

One distilling perfumer points out that an abnormal mortality was experienced by some growers this year with respect to their plantations. In other words, it is held that the plantations established in 1924-1925-1926, that is the time when jasmine skyrocketed to unheard of prices, suffered a mortality this year that was uncommon for plantations as old as 15 and 20 years. The reason offered for this mortality is that the graftings made were of inferior standard, and that the reaction is now being felt.

The figure of 40 per cent. was quoted above, as relating to inferiority of yield over the normal, but it should be borne in mind that the opinion is given out by some close to the soil that the yield this year fell even lower than that, namely 50 to 60 per cent. below the normal.

Now that the heat of the jasmine battle for this year has died down somewhat, it must be said that this season has brought veritable discouragement, and even ruin, in certain instances, to some of the free production growers. It is no longer a question of pride or sentiment with them. They have got to set to and do something else, or find themselves without even the barest kind of a livelihood. In other years extenuating circumstances came in to alleviate the situation, but this year that relief is quite conspicuous by its absence.

Everyone is agreed that the trade may see some very interesting developments with regard to jasmine, the products of which are called the base for all perfumes. For years the jasmine flower has been practically the leading culture of the Grasse region, followed by the rose and the orange blossom. With a catastrophic year like this one, therefore, something is bound to happen all along the line.

Rose-geranium Uncertain

At this writing the last of the rose-geranium has been brought into the distilling perfumers for treatment. This culture, once a very important one for the Grasse district, is losing its importance, ceding its leadership to Algeria. A yield at present is barely one-tenth of what it used to be some years back. This season's yield was, however, relatively important, according to certain distilling perfumers, with about 600,000 kilograms treated.

Prices paid the growers of the rose-geranium were in the neighborhood of 35 francs ($1.40) per 100 kilograms, although some of the growers received only 33 francs ($1.32), delivered, and 30 francs ($1.20) on the spot.

These prices are considered as being entirely too low, and the grower again can hardly make expenses, it is claimed.

Complete figures for the 1930 yield of rose-geranium in Algeria are not available as yet, and the situation, as compared with Grasse, can, therefore, not be definitely fixed at the present time. The second crop has just about terminated, and from indications signalled by one of the distilling perfumers operating in Algeria the 1930 yield is somewhat below that of 1929. This must not, however, be taken as a definite statement. It is simply an opinion, taken from general prevailing conditions as applied to this year's yield for both the first and second Algerian crops.

Prices which were 210 francs ($8.40) f. o. b. Algiers in January-February, went down to 190 francs ($7.60) during the latter part of June, only to go up again gradually to the price in existence at the first of the year.

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The tuberose flowers grown this year were very easily absorbed for treatment, this flower having lost its importance, as explained from time to time. The price decided upon, after discussions during the month of August, was 20 francs (80 cents). This year's yield being small, it was handled very rapidly.

Lavender also showed a deficient yield this year, as compared with last, with a market unusually low, when viewed in the light of what is expected from this culture. Everyone hoped for a rise in price for essential oil of lavender, but up to the present writing nothing of any importance has occurred. In fact, a calm reigns over the entire lavender situation, and the whole trade is watching for future developments.

Practically the entire September number of a publication issued in Grasse this year, was given over to lavender. In treating the market situation, this publication was frank to say that it hoped that a demand would be stimulated for lavender flower products, particularly in chemical and pharmaceutical branches of trade, especially as lavender oil is, apparently, being used more and more as an antiseptic and insecticide, the former for treatment of wounds and scalp, and the latter as protection to cloth goods.

In certain regions the lavender yield was better than others, but in almost all instances where the wild lavender was concerned a deficient yield resulted. Furthermore, the yield in essential oil, as applied to wild lavender, has been reported as below that considered normal for this flower.

Lavender at Market Bottom

Although there is no actual movement upward in lavender, it is felt that the bottom has been reached. Any reaction now should, according to all indications, be upward, however weak that reaction might be.

The last rains in the Grasse region, combined with the period of fine, clear weather following them, have brought the orange trees into fine shape. In fact, the vegetation is so favorable from certain points of view that if a rigorous winter were to step in, much damage would result. Due to this unusually fine weather, the wood is tender. When not hard enough, serious accidents are possible. All hope is, therefore, toward a mild, even-tempered winter.

May rose trees have come through the summer in very fine shape, according to all indications at the present time. Those in sheltered spots throughout the Grasse region are already showing growth, which is, of course, abnormal, not to say dangerous for this culture. A sudden cold spell would also bring damage in its wake for the May rose.

This is a period of rest, or should be a period of rest, for a number of the cultures grown in the Grasse district. Violet beds are being cared for and fertilized at the present time. As reported frequently, the violets of the Grasse region are gradually disappearing. This is a condition that has developed during the past few years. Only the florist trade in violets remains important, and the results upon the perfume and toilet preparations market, in view of the disappearance of the violet, particularly the Parma, promise to be interesting as the seasons pass.

Tuberose bulbs in certain districts are being taken in, the growers profiting by the wonderful weather existing in the Grasse region, thus permitting them to carry out this important work under the most favorable conditions imaginable. As already pointed out, the growers were paid 20 francs (80 cents) per kilogram, which price had to be paid, in order to keep this culture from disappearing altogether. In other words, at 20 francs per kilogram the grower can really afford to grow the tuberose, and still have a bit of profit left.

Gathering of the cassia will begin very soon.

The sweet basil crop for this year was comparatively insignificant, and it is said that this culture will soon be nothing more than a memory for the Grasse region.

Olive trees, generally speaking, look fine enough, but, as reported last month, the crop of olives for the coming season will be relatively small.

During the past few years more and more growers in the Grasse region have been planting grapevines, which thrive very well in that section of the country. This is only another move in the direction of other cultures, which is an economic development that no one can deny at the present time in Grasse and vicinity.

Parento Educates Buyers

Following an informal dinner, A. Doolittle, Compagnie Parento, Inc., led a representative group of the industry, via moving pictures, through fields of rose and lavender, the estate of Pierre Dhumez, and the aromatic chemical works of Organico.

In Bulgaria, where Bottu Mitoco distills his rose, the flowers were in full bloom; the bustle of harvest was everywhere; and the picture of a culture—which if foreign to American eyes—still justifies the classification, the rose industry.

At Vallauris, the cultivation of rose, jasmin, sange sclaree, and tuberose provided a particularly interesting picture. Here highly modernized methods of cultivation, with a background of an annual harvest festival, given each year by Pierre Dhumez to the people on his estate, showed a combination of highly organized industry and community social life rarely seen in this country.

At the works of Organico the chief feature of interest was the high point of industrialization which the aromatic chemical industry has reached abroad. The trip through the Organico works was a thoroughly detailed inspection of real interest to the audience.

Lewis Bros., Inc., manufacturers of Vitalis, have appointed H. B. Thomas manager of sales and advertising. Mr. Thomas was formerly with the Kolynos Co., as purchasing agent, production manager, and advertising manager.

The Trend to Concentrates

(*Continued from page 540*)

regarding the vitamin potency which is placed at not less than 1,000 units of vitamin A, and 48 curative units of vitamin D per tablet. Each tablet is equal to one-half teaspoonful of Squibb's cod liver oil. In this case, since Squibb is also one of the five licensees manufacturing Viosterol unit the Steenbock patent, the Steenbock method of assay is employed to determine at the vitamin D potency. This product is produced under a method of manufacture worked out by Squibb, which method will be patented. The product is protected from the action of the air throughout the process, and the tablets are packed in an atmosphere of carbon dioxide in the bottle. The Squibb tablet is to be swallowed whole, and the dosage is given at 2 tablets, twice daily.

McKesson's Vitamin Concentrate of Cod Liver Oil, manufactured by McKesson & Robbins, Bridgeport, Conn., has been accepted by the Council of the A. M. A. and will shortly be available in the trade. This product is in the form of a liquid and is marketed in a bottle of 11 cc. selling at a wholesale price of $9.00 per dozen with a suggested retail price of $1.25 per unit. The product has a vitamin A potency of 5,500 units per gram, and a vitamin D potency of 11 times the potency of a potent cod liver oil used as standard. A glass dropper designed to give one minim per drop is included in the package. The recommended dosage is given at 3 to 6 drops three times daily.

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FOR A GOOD TOOTH PASTE

The Literature Says:-

(*Continued from page 471*)

Toxicity of Mercurochrome

An investigation was made of various commercial samples of mercurochrome to determine their toxicity. Eight commercial samples were accordingly examined. The mercurochrome was injected into mice, intravenous injection being used. There was a certain variation in the lethal dose, causing 50% mortality, from 37 milligrams to 140 milligrams per kilogram body weight of the animal. There was no parallelism between high toxicity and high mercury content except in extreme cases. A limiting toxicity of 105 milligrams per kilogram is suggested for commercial products. A simple method for determining the toxicity of these preparations is described in the original article. J. H. Brun and G. K. Elphick, Quarterly Journal of Pharmacy, 1930, volume 3, pages 178-186.

Relation Between the Enzymes and Alkaloids of Atropa Belladonna

Fresh belladonna leaves may be stabilized by heating in alcohol vapor at a pressure of one and one half to two and one half atmospheres with only slight loss of the alkaloid. It has, however, been found that this process has no advantage over careful drying, and the appearance is impaired. Losses of alkaloid of up to 20% occur when the leaves are allowed to ferment in the presence of antiseptics at 32° C. At 55° C. no loss occurs. The emulsification of the solvent in the process of determining the alkaloid content is more troublesome in carefully dried and enzyme-free leaves. An improved method is described in which ether-soluble inert matter is first extracted from the powdered leaves which are moistened with acid. J. P. Todd, Journal Royal Techn. College Glasgow, year 1930, volume 2, pages 353-365.

Essential Oil From Silver Fir Seed

The seeds were found to contain 1.8% of an essential oil of density 0.8568 at 15° C., an angle of rotation to the right of minus 82°, 30 minutes at 20° C., a saponification number 0.429, ester number 5.103. The amount of ester present in the oil, figured as bornyl acetate is 1.786%. The total alcohols in the oil, figured as $C_{10}H_{18}O$ is 2.31%. It is soluble in nine parts by volume of alcohol at a temperature of 90° C. The aldehyde test, made with Schiff's reagent, gave a light blue coloration after fifteen minutes. The phenol test gave negative results. The oil was found to consist principally of laevo-limonene, small quantities of sesquiterpenes and traces of borneol, partly in the free state and partly as ester. Boll. chim. farmac, volume 69, 1930, pages 451-55.

Concerning Bergamot Oil

The author is concerned with the question of the presence of terpineol in oil of bergamot and carried out his experiments on the oil obtained by steam distillation. After the terpenes and the main linalool fractions had been removed, fractions were obtained almost analytically identical with the fractions obtained from Cayenne bois de rose. In the last partial fraction 62% primary alcohols and 40% terpineol were obtained. The total alcohol content, including terpineol, geraniol, and nerol, was found to be approximately 15% as compared with 10% in the oil of Cayenne bois de rose. The conversion of the fractions into the acetate and the identification of the same by its physical constants substantiated the presence of terpineol. Deutsche Parfuemeriezeitung, volume 16, 1930, pages 392-4.

Porphyroxine Test for Indian Opium

The purple color, which is produced in the porphyroxine test for opium, has been regarded as characteristic of Indian opium. It has also been used for differentiating the latter from Turkish or Smyrna opium. It was however found that a Turkish opium recently tested gave a positive reaction. F. Bamford, Analyst, 1930, volume 55, pages 445 to 446.

Vitamins in Fatty Oils

The presence of vitamins in oils can be determined by their absorption spectra. Olive oil has a greater vitamin content than cod liver oil, and contains vitamin B as well. It loses its activity when heated to 200° C. Natural grape seed oil is also rich in vitamins, but the refined product is inactive. This is due to the heating of the oil. F. S. Gerona, Ann. Falsif, volume 23, pages 284-290.

C. F. Kelly Leaves Newport

Charles F. Kelly, of the Rhodia Division of Newport Chemical Works, has resigned his position with that firm. Mr. Kelly came to the Newport company when Newport purchased Rhodia Chemical Co., of which company Mr. Kelly was a director and manager of sales. Prior to his association with Rhodia, Mr. Kelly was sales manager of Monsanto Chemical Works, and was also associated with Ralph L. Fuller & Co., and Parke, Davis & Co.

Magnus, Mabee & Reynard are running in their catalogs a series of biographical sketches of members of their staff. In the September-October issue we recognized the picture of our good friend P. C. Magnus and we paused to read an outline of what everyone knows has been a most active life.

Anticipating a change in the beverage situation as a result of the Wickersham Committee report, the Crown Cork & Seal Co., Inc. have substantially increased productive capacity at their Baltimore plants, it was announced on Nov. 5.

Mead Johnson & Co. report nine months ended Sept. 30, a surplus after charges, Federal taxes and dividends on the preferred stock, of $1,152,021, or $6.98 a share on the common stock.

Monsanto Chemical Works and subsidiaries report for the three months ended Sept. 30, consolidated net profit after charges and taxes, $173,515, equal to 41c a share on the capital stock. For the nine months they report $795,912, equal to $1.91 a share. Comparison with corresponding periods last year are not available, due to many acquisitions and change in capital structure.

G. C. Manson, 853 Washington st., Buffalo, N. Y., has been appointed sales representative of the Pennsylvania Sugar Co. and the Franco American Chemical Works, to handle the sale and distribution of the Quaker Brand industrial alcohol and industrial chemicals produced by the Pennsylvania Sugar Co. and Franco American Chemical Works.

Mr. Manson will work under the supervision of A. K. Hamilton, 95 Wall st., New York.

Robert C. Kelly, John Powell & Co., Inc., making an extended business trip through the Middle Atlantic States, upon his return is leaving for a short trip to Canada.

Charles S. Munson, director and Vice-President of the Air Reduction Co., Inc., has been elected a director and member of the finance committee of the Vick Financial Corp.

The Board of Directors of the Abbott Laboratories in a special meeting, held October 14, declared an extra dividend of 12½c a share, payable in cash on November 1 to stockholders of record October 21.

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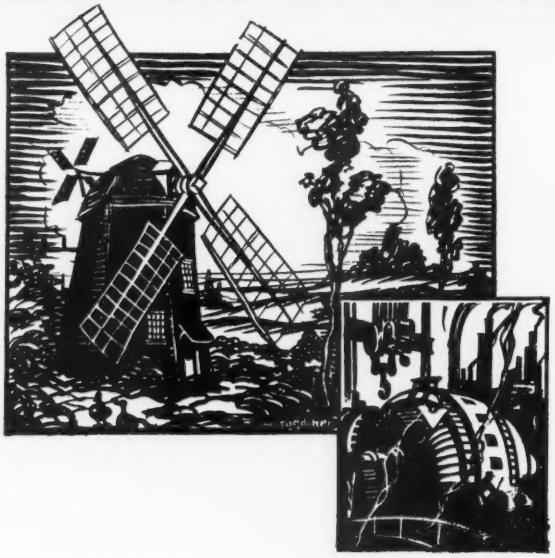
the lisp of the Windmill . .

Today,
the hum of motors

Compare the dynamos and motors used for the transfer of power to-day with the windmill of yesterday. The evolution is amazing. More amazing still is the accomplishment of our motor age in comparison with the age in which the windmill pumped our water and gave us our motive power. . . . Just as the power industry has made its remarkable advancement, so have the Pennsylvania Sugar Company and The Franco-American Chemical Works kept in step with the march of progress, thereby enabling them to meet the ever-changing conditions in the alcohol and chemical markets.

We shall be glad to send, on request, copies of our new booklets, Alcohol for Industrial Purposes and Standardized Chemicals.



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Disease Names Stays on Label

Judge Thomas in the United States District Court, Hartford, Conn., decided that a drug product is not misbranded under the food and drugs act when it possesses some therapeutic or curative value in connection with the treatment or mitigation of the ailments and diseases for which it is labelled.

The decision upsets the policy of the Food and Drug Administration of the United States Department of Agriculture in attempting to secure the removal of disease names from labels and advertisements of proprietary medicines.

The case involves the seizure of a shipment of Lee's Save the Baby, manufactured by William W. Lee & Co., Troy, N. Y. The government's libel against the Lee medicine was based on allegations that the product contained no ingredients or combination of ingredients which would justify the statements on the label and an accompanying circular, that the medicine was for croup, coughs, and sore throat, and was used in cases of grippe, bronchitis, laryngitis, tonsilitis, and pneumonia. The government declared that the product was a mixture of camphor, volatile oils, and Canada balsam in a lard base.

The Lee company denied the charge of misbranding and affirmatively alleged that its product is capable of producing and has produced the effects claimed for it. The court asserted that credible evidence had been offered in support of these contentions, and that the usefulness of the medicinal ingredients of the product for the purposes stated had been established.

Gillette-Auto Strop Merger

Details of the merger agreement between the Gillette Safety Razor Co. and the Auto Strop Safety Razor Co., Ltd., have been announced. The cost to the company of the 198,731 shares of its common stock purchased to be used for reclassification into the 310,000 shares of new $5 preference stock was stated as an average of $79.50 a share. The market price of Gillette stock is now about $35 a share. This new preference stock is to be exchanged share for share for Class A and Class B stock of the Auto Strop Co. in consummating the merger. The new preference stock is to be exchanged share for share into common stock of the merged companies. It is understood an additional 12,500 shares of Gillette common stock, stated as part of the cost of the merger, are to be used in payment of bankers' commissions.

In the pro-forma balance sheet of the combined companies, good will, patents and trade-marks are carried at $22,060,017, against $3,566,231 for the Gillette Co. alone as of December 31, 1929, indicating a value of just under $19,000,000 for the patents and trade-marks acquired from the Auto Strop Co.

Ungerer & Company's catalog and wholesale price list is being distributed. Featured in this issue are descriptive matter and prices on several new synthetic aromatic developments of M. Naef & Co., Geneva, Switzerland, and revised prices on many of the Charabot & Co., Grasse, France, natural floral products. Among the new Naef products are Lilantheme, an outstanding Lilac type; Arolia and Nerolidol, samples of which are now available for the American toilet goods manufacturer.

Charles Harrison Goddard, 59 years old, real estate man and former president of the American Druggists' Syndicate, Inc., died at sea while en route to this country from Europe, accompanied by his wife and daughter.

For the last several years he had resided abroad. Formerly, however, he lived at Great Neck, L. I.

George Lueders & Co., essential oils, announce that Arthur G. Fox is in full charge of their Chicago branch office. Mr. Fox is well-known throughout the essential oil trade, having formerly been connected with Fox & Clarke of this city.

Quinine Industry in Pictures

The cinchona bark industry in Java was the subject of a lecture given November 5 in the Hotel Commodore, New York, by Dr. M. Kerbosch, director of the Government Cinchona Estate and Experimental Station, "Tjinjiroean," Pengalengan, Java. The lecture was illustrated by a number of motion picture films, privately shown before an audience of about one hundred and fifty guests of Dr. Kerbosch, Dr. A. R. van Linge, head of the Nederlandsche Kininefabrik, of Holland, the largest quinine manufacturer in the world, and R. H. de Greeff, president of R. W. Greeff & Co., New York, which imports and sells the major portion of the quinine consumed in the United States.

Dr. Kerbosch and Dr. Van Linge were in this country in connection with the 300th anniversary of the discovery of cinchona bark, celebration of which took place in St. Louis the early part of this month.

Preceding the showing of the film, Fred Seeley, for many years connected with the Paris Medicine Co., St. Louis, addressed the audience. He told in an interesting way of the efforts of the Dutch to establish the production of cinchona from seeds obtained from Peru.

Hoffmann-LaRoche Anniversary

Hoffmann-LaRoche, Inc., Nutley, N. J., manufacturers of pharmaceutical chemicals and preparations, celebrated on November 1, in its beautiful plant in New Jersey, its twenty-fifth anniversary. The celebration was in the form of a luncheon to the entire personnel in honor of Dr. Emil Barell, Basle, Switzerland, president of the corporation and general director of the Hoffmann-La Roche activities in all parts of the world. Mrs. Barell was also a guest of honor. The luncheon, at which about 250 guests were seated, was followed by a presentation of gifts and felicitations from the associated Roche companies in other lands. The guests were welcomed by Elmer H. Bobst, executive director of the corporation.

The Hoffmann-LaRoche business in the United States was started in 1905 at 90 John st., New York. After a number of moves necessitated by expansion ground was finally broken November 17, 1928 for the new plant in Nutley, and the company located there in the following year.

Lee Bristol, vice-president in charge of advertising of Bristol-Myers Company, is the new president of the Association of National Advertisers, having been elected at the meeting held the forepart of this month.

The seventeenth annual convention of the Insecticide and Disinfectant Manufacturers' Association will be held at the Hotel McAlpin, New York, December 8, 9, and 10. Registration will commence Monday morning, December 8, and the business sessions will be officially opened by President Robert C. White. E. B. Loveland, of Stanco, Inc., chairman of the program committee, has arranged a list of speakers and papers for the various sessions which should provide considerable interest.

Among the topics scheduled for discussion is the labeling of insecticides and disinfectants which has been given increased attention lately by the Food and Drug Administration.

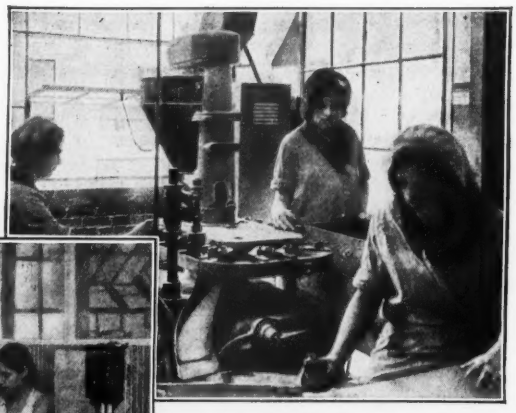
The *new* STOKES Powder Filler -- in Leading Plants

This modern versatile machine will fill practically any powdered or granular product into boxes, jars, tins, cans, etc. A production machine. (30-40 containers per minute).

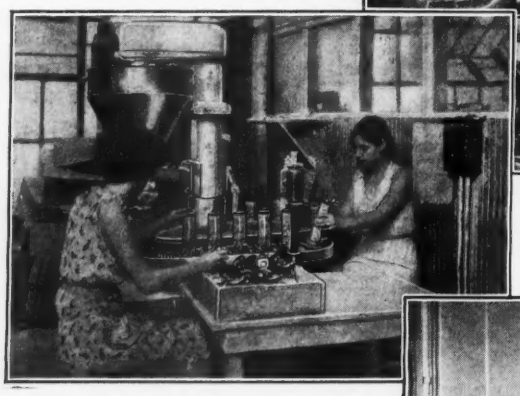
Comes in full automatic model as shown and basic model to which attachments can be added as desired. These attachments, the same shown on the full automatic model, include overhead hopper feed, adjustable container carrier, capper, "no can—no fill" control and automatic container discharge. Other attachments are available for handling granular material and for packing. Accurate, clean, simple, compact, quiet.

Write for special booklet on complete line of Powder Filling Equipment.

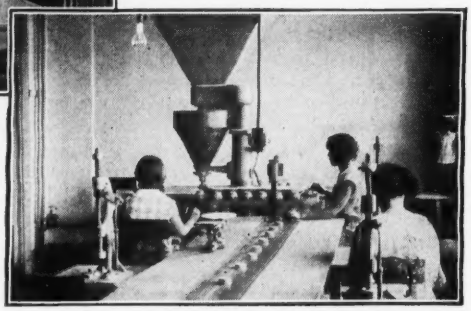
FJS



STOKES Powder Filler, 15A, Filling Tooth Powder Tins. This manufacturer said: "Entirely satisfactory"



STOKES Powder Filler, 15A, Filling Talcum Tins. This manufacturer just ordered a second full automatic model



STOKES Powder Filler, 15A, Filling Face Powder Boxes. This manufacturer said: "Cut our packing costs in half"

STOKES Powder Filler, 15A

We manufacture all the equipment listed and solicit your inquiries.

- Tablet Making Machines
- Vacuum Pans and Dryers
- Molds of all Types
- Powder Fillers
- Drying Closets
- High Vacuum Pumps
- Percolators
- Capsule Fillers
- Oscillating Granulators
- Coating and Polishing Pans
- Water Stills
- Drug Mills and Mixers
- Alcohol Recovery Apparatus
- Tube and Jar Fillers
- Jacketed Kettles
- Bottle Washers
- Conveyors
- Special Machinery

FJSTOKES MACHINE COMPANY

Pharmaceutical Machinery since 1895

5932 Tabor Road Olney P. O. Philadelphia

New York Office—103 Park Avenue

F. J. STOKES MACH. CO.
Philadelphia, Penn.

Please send copy of booklet "Better Powder Filling."

Name .....

Position .....

Company .....

Address .....

Filling and Filling Machines

By Francis Chilson

That the manufacturer of many products is more in need of speed in filling rather than the manufacturer with very large volume specialties is the thought expressed by Mr. Chilson who calls upon equipment manufacturers to produce machines capable of much more speed when used on several products that require individual set-ups.

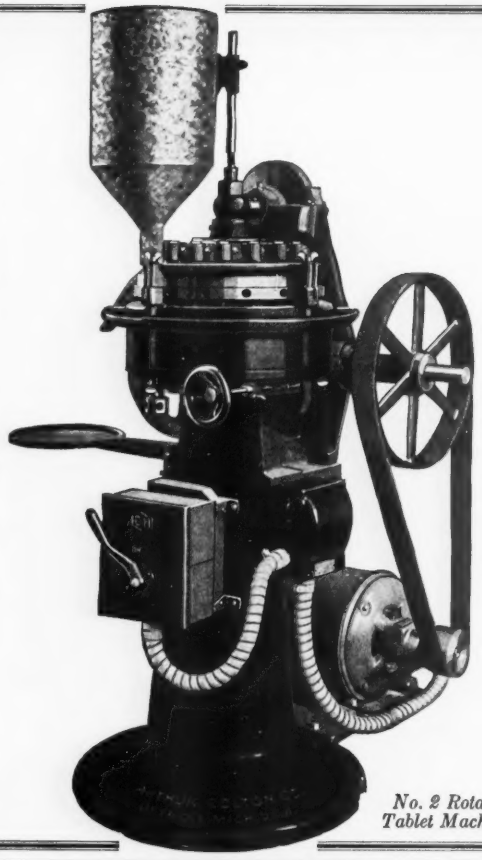
FILLING is one of the most troublesome of manufacturing problems. It is at this point in the manufacture of toilet goods and drugs, that bulk handling terminates and package handling begins. Preparing batches is the most flexible and the easiest controlled of the two major phases of manufacturing; namely: preparing, and packaging. The size of batches can mbe odified or changed very easily; it is just as easy to make two hundred gallons of a given preparation as it is to make ten, and larger batches do not require much longer to make than smaller ones, nor do large batches involve longer set ups and cleaning of equipment.

Filling differs from preparation in that the size of the batch determines the efficiency of the operation; that is, the number of set ups and the amount of cleaning involved. A filling machine operating at a constant speed will take twice as long to fill two hundred gallons as it will to fill one hundred; yet, the cost per unit of filling the larger quantity will be less than the cost of filling the smaller quantity because of the extra set up and also cleaning.

But the large batch in our industry is the exception rather than the rule. The number of preparations on the market whose volume runs into three million units per annum is very small in comparison with the number of preparations whose volume is less than one million containers per year. But machinery makers seemingly do not give sufficient consideration to this fundamental fact in designing filling machinery, particularly. Very high speed filling machines are built, perfectly adaptable to large volume production but woefully unsuited to small volume production, where frequent set ups are necessary due to changes in size of container and changes in kind of preparation.

A relatively slow filling machine—say one operating at thirty containers per minute—will fill, if operated only seven hours a day, three million containers in a working year of two hundred and forty days. And the cost of such filling to the big manufacturer would be very small indeed. But filling machines are available in capacities ranging from thirty containers per minute to more than four hundred per minute. And in every instance, almost, filling machines of a capacity of more than one hundred per minute could not be used because of difficulties of cleaning and set up on any but the very large volume items.

Now it is not the large volume manufacturer who is in need of very high speed; it is the manufacturer who has a great variety of products in many sizes of containers. And these manufacturers preponderate in our trade. This does not mean that such manufacturers are necessarily small; most of the very large manufacturers are in this class. One great cosmetic house for example produces eighty different kinds of cream, pastes and ointments. And the price lists of most of the pharmaceutical houses will show a staggering number of small volume items, even though these houses may be noted for enormous volume of given specialties.



No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

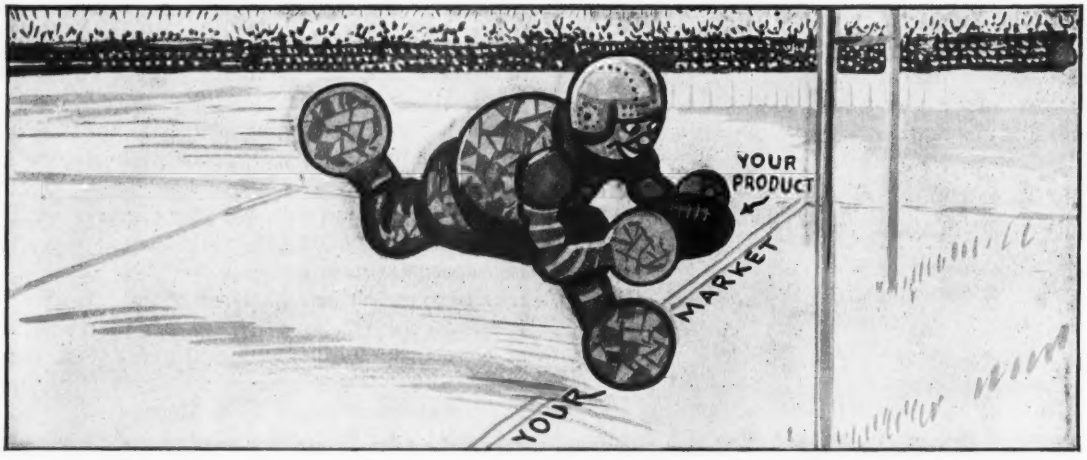
The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

Write for Catalogs.

ARTHUR COLTON COMPANY

2620 East Jefferson Ave.

Detroit, Michigan



CLOSURE CORK-TEX

the New Improved Sealing Medium

will carry your product safely in perfect condition to your market thereby winning good customers. Write us for details.

BOND MANUFACTURING CORPORATION WILMINGTON · · · DELAWARE

Therefore, it is not in the filling of large volume products that tremendous speed is needed; it is in the filling of the small volume products, where high operating speed must compensate for frequent set ups and cleaning due to changes of container size or products. To match the filling cost of a preparation filled day in and day out at a steady rate of speed—let us assume thirty per minute—the small batch preparations would have to be filled at a speed virtually twice as fast.

But machinery manufacturers do not yet realize this as fully as they might. They design magnificent high speed machines bedecked with multitudes of pipes, tubing, gears, floats, pumps, heads and gadgets. Some machinery manufacturers seem to feel that in order to make a machine appear worth its price, they must dress it out with a multitude of accessories. Such machines are too cumbersome and costly for production, where two hundred pound or two hundred gallon batches are the rule rather than the exception.

On the other hand drug manufacturers do not give the machinery people a fair break. They cling to archaic methods and machines because they obstinately refuse to believe that high speed machines, if properly designed, will pay for themselves even though they have to be changed over frequently; or because of limited production, may spend a good part of the time idle. This is strikingly illustrated even in the great houses which produce enormous volume of given specialties. All cost reduction effort is expended in turning the specialties out at great speed, which really is a relatively simple thing to accomplish, while in the selfsame plants the efficiency of the high speed output is mitigated by the cost of turning out necessary small volume items in other departments. In many of these great plants you will see enormously efficient departments operating by the side of departments where the methods and equipment of a generation ago are still employed. And as such lines grow and expand, the plants seem to grow and expand likewise in order to provide space, not for the large volume items, but for the small volume items.

This may seem to be a rather large order for the machinery people to fill; but they have done it in the past when the demand was put upon them—they can do it now if they get the entire co-operation of the producers. It may be stated almost axiomatically that the machinery people, and not the producers, are responsible for whatever state of efficiency has been attained by the industry. Producers seem to be willing to buy more equipment of indifferent character so long as it is relatively cheap, than to buy less equipment of better character, which may be of higher initial cost.

All this is not merely speculation and Utopian dreaming. One of our great tube manufacturers

AN ADHESIVE FOR EVERY MACHINE OR HAND OPERATION

Put Your Best Foot Forward!

You spend infinite care on the proper preparation of your products. So why not capitalize this effort by creating an impression of quality in the mind of the buyer, through an attractive package?

The use of

MIKAH

Bottle Labeling Gum

in conjunction with a well designed label insures the desired result. Mikah Bottle Labeling Gums hold fast always—on any bottle, any place, without stains or blemishes.

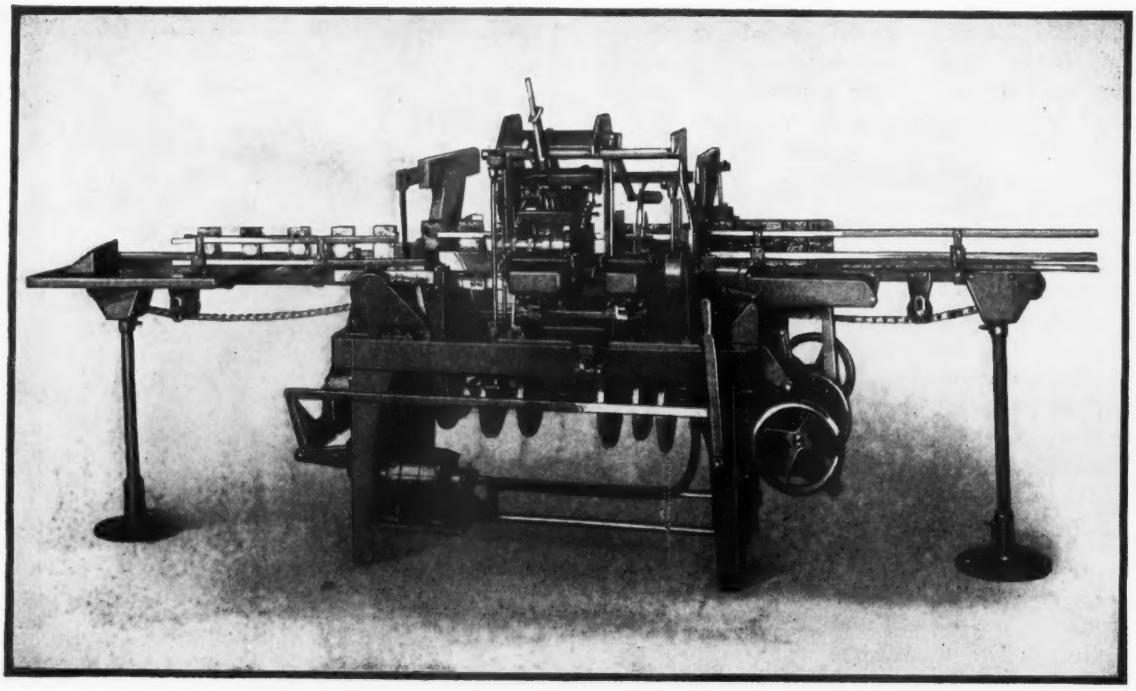
The Nation's standard from Coast to Coast

NATIONAL ADHESIVES CORPORATION

***Executive Offices:* NEW YORK**

WORLD'S LARGEST PRODUCER OF ADHESIVES

World Automatic Straightaway Labeler



Fully automatic. In two types, the Single for face labeling (as illustrated) and the Double labeler for applying front and back labels in one operation. It is particularly designed for labeling flat, round, oval or panel bottles and jars and other packages, and various sizes of bottles can be handled on the same machine.

Operating parts are readily accessible. An experienced operator can easily and quickly change the labeling attachments from one size to another. Bottles are labeled in an upright position, automatically timed and centered and each label is correctly placed. Labels are gummed in the center as well as on the edges, insuring uniform and smooth labeling. Conveyor can be made to meet individual requirements and connected to other automatic units

The complete line of World Labelers includes both automatic and semi-automatic machines.

ECONOMIC MACHINERY COMPANY

Largest Manufacturers of Labeling Machines in the World

WORCESTER, MASS., U. S. A.

WORLD LABELERS

proved that he could increase his capacity and *actually decrease* the space required for production. Now a metal tube is a highly specialized product requiring far more accurate mechanic control than any of the products of our industry. If, therefore, an accomplishment of this kind is possible on a product of this character, ought we to hesitate to tackle a problem relatively easier to solve ?

With the foregoing in mind let us consider quickly and roughly some of the problems of filling specific items. The complete cosmetic line carries usually, cleansing, tissue, cold, vanishing, astringent, bleaching, and acne creams; hair pomades, hand creams, medicated ointments, bleaching and mud packs. Drug lines carry, mentholated and medicated petrolatum, lanolin ointments, zinc oxide and mercurial ointments and salves. The great bulk of cream business is undoubtedly done in the first four items as in the drug industry the pretolatum and lanolin base preparations preponderate.

Some of these preparations can be filled hot and therefore can be efficiently filled. But whenever preparations are filled hot, they must be cooled before capping and that means cooling conveyors or refrigerating devices. Preparations exposed to the air in urban localities are likely to collect dust, or powder from adjacent powder rooms. Items containing perfume may not be handled with impunity as the highly volatile essential oils will pass off if over heated. Cold creams contain much water and considerable zinc oxide, and will break down if subjected to excessive heat and violent mechanical action. Vanishing creams if filled too warm will not solidify in the form common to the type but will remain fluffy if they do not actually break down. Other creams and medicated ointments usually may not be filled hot because of the danger to medicaments such as phenol; or their medicaments will attack ordinary metals as in the case of mercurial compounds, alkalis and acids. Obviously what is needed for filling such preparations are machines easily set up and cleaned; designed to fill cold, and constructed of metals or alloys resistant to a wide range of chemicals.

Lotions and all other free flowing liquids are easier to fill than pastes or creams. Even though some of

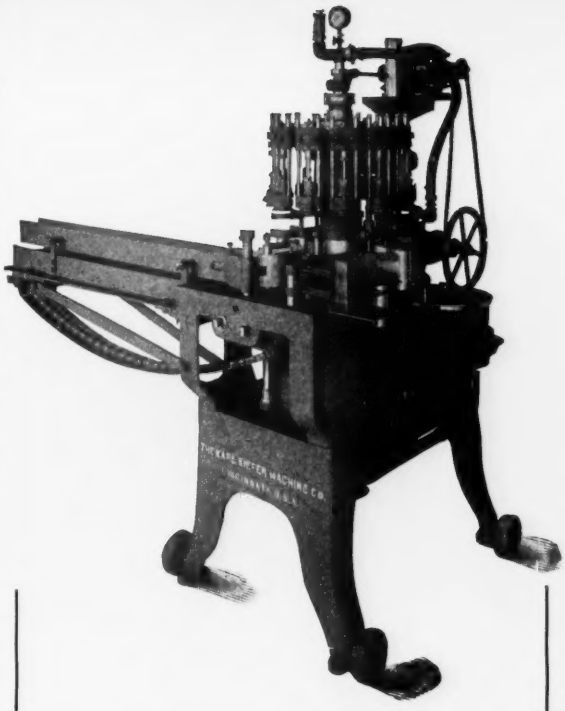
WHERE BRILLIANCY COUNTS

USE

SCIENTIFIC FILTERS FOR FINE FILTRATION

ASBESTOS FILTERS
PRESSURE FILTERS
ULTRA-FINE DISK FILTERS
PULP FILTERS
FILTERING MATERIALS
PORTABLE ELECTRIC MIXERS
VACUUM BOTTLE FILLING MACHINES

SCIENTIFIC FILTER CO.
1 Franklin Square, New York City



The KIEFER AUTOMATIC Rotary Vacuum Filling Machine

Used where efficiency, low cost operation, dependability count!

Today, there are over 200 Kiefer Automatic Rotary Vacuum Filling Machines filling liquid products of all kinds.

Light, heavy, syrupy, foamy products are handled.

Bottles as small as ¼oz. and as large as 40oz. are filled. Also sprinkler top bottles and small cone top cans.

Neat, accurate bottling at high speed.

Submit samples of your products and bottles. Let us tell you what a Kiefer Automatic Rotary Vacuum Filler will do in your plant.

Also write for our new catalog showing various sizes, and Kiefer semi-automatic and hand-operated Vacuum Filling Machines.

The Karl Kiefer Machine Co.,
CINCINNATI, O.

NEW

Tight-seal Wrapping

with moisture proof Cellophane

Moisture-proof Cellophane can now be wrapped as air-tight as waxed paper, giving equal protection to the goods, and *decided sales advantages*

Now you can have *all* the sales advantages of a completely transparent wrapping, *plus* the air-tight, moisture-proof protection formerly obtainable only with waxed paper.

The Package Machinery Company, backed by wide experience in working with Cellophane, can now supply machines to wrap moisture-proof Cellophane as air-tight as waxed paper.

Moisture-proof Cellophane, being perfectly transparent, gives much more effective display to the package or product than waxed paper. Its glistening surface does not become clouded with dust as the surface of waxed paper does—goods wrapped in it are always fresh in appearance; never shopworn.

Tests show that moisture-proof Cellophane, wrapped by the Tight-seal method, helps to retain the flavor, fragrance and other natural characteristics of a product more effectively than either waxed paper or foil.

Send us your product

We will return it to you, sealed in moisture-proof Cellophane, with complete information regarding the machinery to do the work.

PACKAGE MACHINERY COMPANY
Springfield, Massachusetts
New York Chicago Los Angeles
London: Baker Perkins, Ltd.

PACKAGE MACHINERY COMPANY
Over 150 Million Packages per day are wrapped on our Machines

them may require warm filling, they do not have to be refrigerated or chilled. The importance of proper construction to resist chemical action is here emphasized. A much wider range of chemicals is used in preparing lotions than is the case with creams or powders. Wherefore, the emphasis on highly resistant alloys. Cleaning is somewhat easier on lotion fillers because liquids may be flushed out of piping tanks and, reservoirs by the use of proper solvents; the materials do not cling to operating parts and piping as is the case with highly viscuous substances.

Powders will not flow readily by gravity, therefore, if filling machines are filled from the floor above, the feed channels should be very wide and accessible for cleaning. Powder will pack and form arches over narrow feed channels. Since cleaning must be thorough if contamination of color is to be avoided, filling machines should be constructed so as to permit brushing down. Uncoated iron will discolor powder, but aside from that, powders are not as suseptible to chemical reaction from the metals of which the fillers are made as are either lotions or creams. Powder machines should be constructed to insure thorough packing of the powders into the boxes to prevent settling and should fill with as little waste as possible. The construction of the powder container has more to do with the efficiency of the powder filler than any other single factor. Powder fillers are the most specialized of fillers. The range of chemicals filled is very limited, and, since they are filled both cold and

A NEW AND BETTER CLOSURE!

"FILMASEAL"
(Trade Mark Registered)

Filmaseal deposits a transparent film across the top of the container to which it tightly adheres.
This film must be torn off or ruptured to reach contents.
Our standard continuous thread screw caps are made to include the Filmaseal and make a double seal for your protection.
The application of Filmaseals is automatic and intended for large scale production.
If your product is affected by air—if it is subject to leakage—evaporation—or deterioration—send us a sample to Filmaseal for your consideration.

Bottle Closure Specialists Since 1890

FERDINAND GUTMANN & CO.
Bush Terminal No. 19 BROOKLYN, N. Y.
Metal Screw Caps
Saniseal Metal Milk Caps *Distilled Water Caps*
Crown Corks *Special Purpose Caps*
Patents pending covering FILMASEAL and Every Phase of Its Application and Use.

dry, the danger of chemical reaction is minimized. Powder fillers should fill uniformly, should pack adequately and should be as nearly dust-proof in action as is possible to make them. Modern powder fillers as a rule are much more adaptable to changes in products and containers than is the case with either cream or lotion fillers. Probably this is due to the fact that the material to be filled usually is fed from a hopper forming an integral part of the machine and therefore accessible for cleaning. The operating parts generally are of necessity simple and likewise accessible.

Much that has been said here with regard to flexibility applies with equal force to capping, labelling, and cartoning equipment. But space will not now permit the treatment of each of these categories. It is to be hoped that we will find it possible to present papers on them in the near future.

Package Machinery Co., Springfield, Mass., has introduced a new machine which makes possible a moisture-proof wrapping with the use of "Cellophane." The company refers to this new development as the "Tight-seal" method and it is said that packages wrapped in this way are more impervious to moisture and atmospheric conditions than has been possible even with the use of waxed paper. Moisture-proof "Cellophane" and a special moisture-proof glue are applied by this machine in such a manner as to give an air-tight seal, and at the same time, produce an attractive package through the use of "Cellophane." Manufacturers interested may send their products to the company for a demonstration of packaging by this new method.

HOPKINS
ANALYZED
Crude Drugs
The Earth Contributes
J.L.HOPKINS&CO.
DISTRIBUTE
ANALYZED
CRUDE
DRUGS
Tested BOTANICALLY
Tested MICROSCOPICALLY
Are you having trouble with your soap?
If you are, investigate
HOPKINS POWDERED SOAP
NEUTRAL WHITE
Especially adaptable for use in tooth powders and pastes, mouth washes, bath powders, and shampoos.
Neutral, non-irritant, snow white and free from a soapy flavor, yielding a profuse, lasting lather.
Possesses exceptional cleansing power, and is not prone to become rancid, nor harden with age.
Yields finished products that are uniform in composition and appearance.
J. L. HOPKINS & COMPANY
Importing Drug Merchants
135 William St.
New York
Tested CHEMICALLY
Tested PHYSIOLOGICALLY

Delivery
There's a BOND CREED . . . Bond Tubes arrive when they're promised . or else it's beyond our control. Prompt Delivery is just one of the satisfactory reasons for using BOND TUBES.
SOMEBODY'S DENTIFRICE
SHAVING CREAM
PHOTO PASTE
TOOTH PASTE
COLD CREAM
ARTISTS' COLORS
ANCHOVY PASTE
OINTMENT
BOND TUBES
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WILMINGTON, DEL.
New York Offices: I.H.BRODRICK
475 FIFTH AVE (at 41st)
Phone CALedonia 4867

Capper-Kelly Bill

(*Continued from page 440*)

bought at any price he pleases and his right to do so cannot be restricted consistently with the antitrust law; so long as the *Miles* case stands a manufacturer will have great difficulty in securing injunctive relief in the federal court from this unfair method, for the same reason; even if the *Miles* case is set aside, a law expressly outlawing this unfair method and expressly granting the power and authority stated will greatly strengthen antitrust law enforcement against the method and materially assist the manufacturer in securing court relief from it, moreover such a law is a proper foundation for statutory permission of preventive trade action. This argument is also convincing.

The bill is subject to still further formal criticism. The criticism is that whereas it repeals the *Miles* case law it does not also repeal that of the *Beech-Nut* case. In the latter case, as we have seen, a resale price plan was condemned notwithstanding it was free from contract. This criticism is technically correct; but it is of little practical significance. In the first place there is reason to believe that the *Beech-Nut* decision may be reversed, upon review. In the second place there is no reason to believe that the government will enforce the antitrust law against a similar plan if Congress repeals the *Miles* case law upon which the *Beech-Nut* case ultimately rests, especially in view of the divided opinion of the court in the latter case. In any event a comprehensive remedial law would not be subject to this criticism.

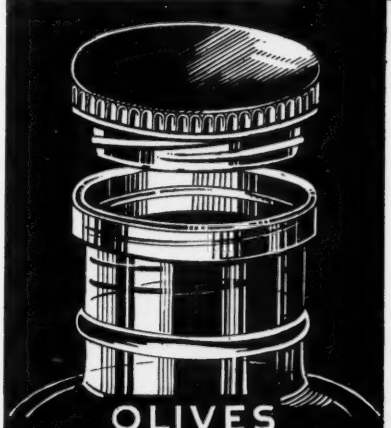
This brings us to the consideration of the form of a bill which would propose a comprehensive federal remedial law against this evil (to the extent such a law is applicable) and at the same time would be strictly limited to it. In my opinion such a bill would contain four sections. The first section would declare that predatory price cutting in the resale of an article of merchandise identified by a trade-mark or trade-brand or trade name, which constitutes an unfair method of competition, is unlawful. (Note the qualification, "which constitutes an unfair method of competition.") The second section would empower and direct the Federal Trade Commission to prevent the use of this unfair method in interstate (and foreign) commerce. The third section would authorize the owner of a trade-mark or trade-brand or trade name to secure injunctive relief from the use of this unlawful method in the resale of his article, in the federal court, and to collect any resulting damages. (This, of course, subject to the jurisdiction of that court.) The fourth section would provide that the owner of a trade-mark or trade-brand or trade name does not violate the antitrust law by taking individual trade action directed to prevent the use of this unlawful method in the resale of his article, provided that (a) in doing so he acts in the normal trade course of his own private business fairly conducted in an open, free and competitive market; (b) the action does not involve any attempt to monopolize or any price agreement between competitors forbidden by the antitrust act of July 2, 1890.

Such a bill would provide a simple and comprehensive federal remedial law strictly confined to the evil against which it is directed. It would be effective to set aside the present federal anti-resale price law. It would strip this unfair method of any technical legal character or defense, now existing under the federal law. It would empower and direct the enforcement of the federal unfair competition law against it, now practically impossible. (Of course such enforcement is necessarily limited to interstate, as distinguished from intrastate commerce.) It would authorize any owner of a trade-mark (without discrimination) to secure injunctive relief in the federal court, now difficult. This is a discretionary remedy and necessarily so. It would permit him to take preventive trade action (without distinction as to method), subject to the limitations stated. They are required to prevent the abuse of the permission, but do not interfere with its proper exercise. To transcend these limitations in violation of the anti-trust law is to bring it down on the offender. This remedy is likewise discretionary and necessarily so. A manufacturer must be left free to merchandise in pursuance of the exigencies of trade confronting him. And they will differ with different manufacturers and in different trades. The most that can be done is to provide a due trade remedy for such use as one cares to make of it. To enforce such a law against a price cutting practice, the government would have to prove that it is predatory and an unfair method of competition. This is as it should be; and if an offense exists there should be available trade evidence to establish it. To secure injunctive relief from a price cutting practice, the manufacturer would have to allege and, if called upon, to prove the same characteristic facts. And the same comment applies. As to preventive trade action, the manufacturer would be free to exercise his judgment within the limitations prescribed and subject to antitrust law review if he transcends them. This again is as it should be, if such trade action is to be permitted. Hence what is predatory price cutting that constitutes an unfair method of competition is a question in the first instance for trade or commission answer, as the case may be, and ultimately for court decision. In the course of time guiding judicial definitions might be expected, which would be based on fact. Perhaps the law should state its own broad definitions.

In outlining this substitute bill I offer a wholly personal suggestion in order that the discussion may be constructive. It is not enough to note the defects of the bill under review, if remedial legislation is desirable. In making this suggestion I am under no misapprehension that a federal law can remedy an interstate situation. It is necessarily confined to

New,

A Wide Mouth "INNER SEAL" For Jars & Bottles



Now you can use the famous *inner seal* for the products you pack in wide mouth bottles and jars.

Ideal for creams, powders and salts! You will be delighted with the attractive appearance of this wide mouth inner seal.

You can select seals of Durez, Bakelite or Porcelain—in colors if you wish. These seals screw into a thread formed on the inside neck of the bottle.

A perfect seal and reseal, long in commercial use for narrow mouth bottles in this country and Canada for such difficult to seal products as hydrogen peroxide, the *Inner Seal* gives the distinguished package appearance and perfect protection you have been seeking for your product.

May we send samples for you and your organization to examine—for your laboratory to test? Please state the nature of your product so that proper liners may be included.

Spring Stopper Company

165 Broadway, New York, N. Y.

Telephone Cortlandt 1495-1496-1497

Patentee of bottle finishing devices applied to the various types of automatic bottle making machines. Patents in United States, Canada and Foreign Countries.

NEW BRAND

NEW QUALITY

BINDING POWER

HAVE you ever experienced in a social gathering the influence of a magnetic personality, whose grace and charm combine to unite unlike characteristics into a homogeneous unit of good fellowship?

Such is the predominant quality of "SNOW TOP" Chalk when used in dentifrices and other similarly compounded mixtures. It is a background on which the essential oils display their therapeutic and flavoring values, unchanged by its presence on account of its strict neutrality.

We have called this BINDING POWER because there is no separation of oils or other constituents when compounded with "SNOW TOP" Chalk.

Industrial Chemical Sales Co., Inc.
230 Park Avenue, New York City

PRECIPITATED CHALK

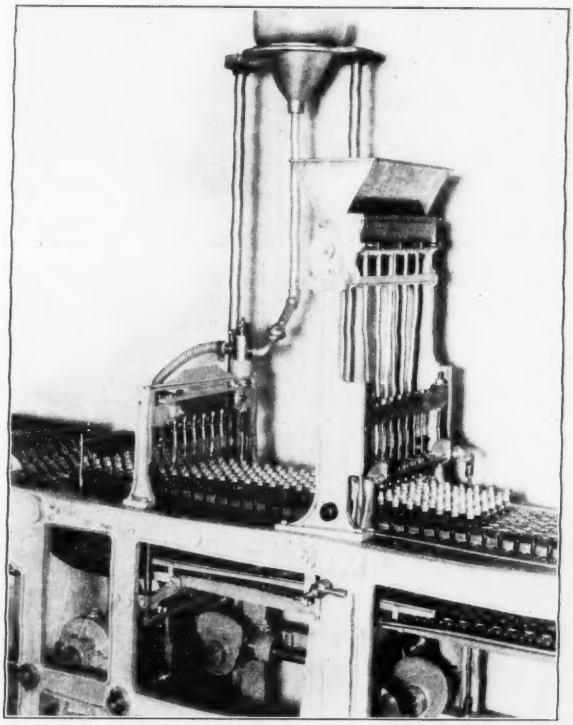
CRETA PRÆCIP. U. S. P.

?

DO THESE "SNOW TOP" qualities interest you?

1 Uniformity
2 Color
3 Purity
4 Cleanliness
5 Physical Character
6 Freedom from Grit
7 Absorptive Properties
8 BINDING POWER

interstate commerce. In making this suggestion I am under no misapprehension that the evil of unfair resale-price cutting can be cured by law. At best such a law is but a partial remedy. It is an important remedy, as far as it goes, and much can be done by its use. But in its ultimate conception this evil will remain unless and until its cause is removed. To remove its cause more than a law is required. The requirement is the economic pursuit of business fairly conducted.



Closeup of new installation for handling nail polish in the Northam Warren Corp.'s plant which automatically fills and corks a gross of bottles every minute. This machine was constructed by Fowler Machinery & Equipment Corp. which has announced its removal from 124 White st., New York, to its new plant at Bridgeport, Conn. The company will continue to maintain a service station in New York at 460 West 34 st., Telephone Bryant 1575

"Outsert" is the name given to a booklet glued to a container. The booklet is opened by perforations, and may be glued back in place so it will last during the life of the package

Spring Stopper Company has adapted its effective closure to wide mouth jars as illustrated above

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Dr. Alfred Weed, entomologist of John Powell & Co., Inc., was married November 20. Mrs. Alfred Weed was the former Miss Jean Droppers of Shorewood, Wisc. The wedding took place at the home of the bride's parents. After an extended motor trip through the Middle West, Dr. and Mrs. Weed will reside in Jackson Heights, N. Y.

J. C. Eno Ltd., manufacturers of Eno Fruit Salts, are now broadcasting daily over station WABC with the exception of Sunday. Broadcasts are from 7.30 to 7.45 in the morning and are under the supervision of "Smiling Billy" Mason.

H. W. Adkins has been appointed general manager of the Druggists' Supply Corp., 177 Williams st., New York. He succeeds F. C. Hunt, who has made an important connection, shortly to be announced.

For the past year and a half, Mr. Adkins, as service engineer for the Druggists' Supply Corp., has been responsible for the development and institution of improved methods of operation and merchandising among the members of the group. He has worked out sales policies, plans for warehousing and accounting, and has devised means for decreasing overhead expenses and for increasing the sales of profitable items.

HEYDEN

FINE CHEMICALS

FINE HEYDEN CHEMICALS

SALICYLIC ACID

ACETYL SALICYLIC ACID

METHYL SALICYLATE

SODIUM SALICYLATE

and MINOR SALICYLATES

Creosote
Creosote Carbonate
Guaiacol
Calcium Guaiacol Sulphonate
Potassium Guaiacol Sulphonate

Formaldehyde
Para Formaldehyde
Hexamethylenetetramine

Benzoate of Soda
Benzoic Acid

Bromides

Benzaldehyde
Benzyl Chloride

Glycerophosphates

Silver Salts

HEYDEN CHEMICAL CORP.

50 UNION SQUARE NEW YORK
180 N. WACKER DRIVE CHICAGO

Prices Current

Medicinal, Aromatic, and Photographic Chemicals, Crude Drugs, Spices, Essential Oils and Concentrates, Miscellaneous Raw Materials, etc.

Chemical prices quoted are of American manufacturers, spot New York, f. o. b. for immediate shipment, unless otherwise specified.

Products sold f. o. b. works are so specified. Imported chemicals are so designated. Resale stocks, when a market factor, are indicated "second hand."

Crude Drugs and Essential Oils are quoted f. o. b. New York (Manhattan with limitations) for immediate shipment

The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Acetanilid
Ammonium Valerate

Chemicals

Monthly Review

Alcohol Quite Steady

Alcohol continues to maintain its recently acquired firmness and this is to be expected at this time of year. A sharp increase in interest in the item has been noted with shipments against contracts made earlier in the year going forward briskly. Profits to distillers, however, are reported as not being encouraging as shipments now going forward are from alcohol manufactured from high priced molasses. Better prospects for earnings in the future are noted as molasses has been reduced considerably and is now at a level more commensurate with general conditions. It is reported that about 4½c per gallon was paid for the new crop of molasses. Competition in the anti-freeze business by methanol and other substitutes for alcohol is still being felt but the market has been stabilized in spite of this condition.

Bromides Off 5c Pound

Bromides have been reduced during the past month. Ammonium bromide is offered at 43c and 44c per lb.; sodium at 37c and 38c per lb.; strontium at 46c and 47c per lb., and sulfocarbolate at 25c per lb. Competition has been particularly keen in these items but it is reported that the easier price has to a certain extent relieved this situation.

Ether Moves Lower

While the prices of sub-divisions of ether remain unchanged, prices of 50 and 100 gallon drums have been cut by 3c per pound and are now quoted at 10c per pound. Competition from new sources of ether has caused the condition that now exists in the market. The makers who instigated the lower prices are strong companies well in a position to continue even though the reduction made eliminate a large part of the anticipated profit in the item.

Reports state that at least one of the newer makers obtains the ether either as a by-product or at least by some different method than is employed in manufacturing ether from alcohol. Factors generally do not venture an opinion on the future of the market but there does not seem to be any likelihood of the market declining further.

The fact that the manufacturers causing the break in the market do not sell sub-divisions, has caused other manufacturers to leave prices on the smaller lots unchanged. It is likely that these sizes might feel the effects of the decline at some future date although nothing definite is indicated.

	Current Market		1930 High	1930 Low	1929 High	1929 Low
Acetanilid, USP, 200 lb bbls..lb	.36	.37	.37	.36	.37	.36
Acetone, pure 350 lb drs wks..	.12	.14	.14½	.12	.19	.14
Acetphenetidin, 225 lb bbls..lb.	1.25	1.30	1.30	1.25	1.35	1.25
ACID, Acetylsalicylic, 225 lb ....bbls.	.85	.90	.90	.85	.90	.85
Agaric, 1 oz vials.....oz	...	3.50	3.50	3.50	3.50	3.50
Arsenous, USP, 220 lb bbls lb.	...	.18	.18	.18	.18	.18
Benzoic, USP, 100 lb bbls.lb.	.60	.61	.61	.60	.61	.60
Boric, 300 lb bbls.....lb.	.09½	.10	.10	.07½	.10½	.07½
Cacodylic, 5 lb. bot.....lb.	...	8.00	8.00	8.00	8.00	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82	4.82	4.82	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18	.18	.14	.19	.14
Cinnamic, 5 lb cans.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Citric, USP, crys 230 lb bbl .....lb.	...	.46	.46	.46	.46	.46
USP, crys imp. 112 lb keg .....lb.	.65	.70	.70	.65	.61	.59
USP, powd 200 lb bbl...lb.	...	.47	.47	.47	.47	.47
Diethylbarbituric, 1 lb bot lb.	4.00	4.50	4.50	3.80	4.60	4.60
Gallic, USP, 150 lb bbls..lb.	...	.74	.74	.74	.74	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75	1.75	1.40	1.75	1.40
Hydriodic, USP, 10% 5 lb bot.....lb.	...	.70	.70	.70	.80	.80
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	...	.55	.55	.55	.55	.55
Hypophosphorous, USP, 30% .....lb. 5 gal demis.....lb.	...	.85	.85	.85	.85	.85
Lactic, USP, VIII 100 lb cbys lb.....	.53	.59	.62	.53	.62	.56
USP, X 100 lb cbys.....lb.	.57	.59	.64	.57	.64	.62
Phenylcinchonic.....lb.	...	3.25	3.25	3.25	4.50	4.50
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15	.15	.14	.15	.14
Pyrogallic, crys 5 lb cans..lb.	1.30	1.40	1.40	1.30	1.50	1.40
Resublimed, 5 lb cans...lb.	1.60	1.70	1.85	1.80	1.85	1.80
Salicylic, USP, 100 lb bbls.lb.	.40	.45	.45	.40	.40	.39
Stearic, double pressed, bags .....lb.	.12½	.13	...	...	...	...
Triple pressed, bags,....lb.	.14½	.15	...	...	...	...
Succinic, 100 lb bbls.....lb.	...	1.35	1.35	1.35	1.35	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06	.06	.05	.06	.05
Tannic, USP, fluffy 50 lb bbls. .....lb.	.90	.93	.93	.82	.93	.85
Powd 200 lb bbls.....lb.	.80	.85	.85	.80	.85	.80
Tartaric, USP, 300 lb bbls.lb	.32½	.33½	.38½	.32½	.38	.37½
Aconitine, Alk, crys 1 oz vials .....oz.	...	30.00	30.00	30.00	30.00	30.00
Amorphous, 1 oz vials....oz.	...	20.00	20.00	20.00	20.00	20.00
Adeps Lanae, hyd 350 lb bbls lb.	.14½	.15	.16	.14½	.16	.15
Anhydrous, 350 lb bbls....lb.	.15	.16	.18	.16	.18	.16
Agaricin, 1 oz vis incl.....oz.	...	2.32	2.32	2.32	2.32	2.32
ALCOHOL, Benzyl, 5 lb bot lb.	1.25	1.35	1.35	1.25	1.35	1.25
Ethyl, USP, 190 pf 50 gal bbls.....gal.	2.69½	2.79½	2.79½	2.69½	2.79½	2.69½
Pure tax free.....gal.	.61	.69	.69	.61	.69	.61
Grain drums.....gal.	2.69	2.79	2.79	2.69	2.79	2.69
Denatured, drums add 7c for bbls.....						
No. 1 spec.....gal.	.42	.46	.59	.42	.60	.47
1 comp.....gal.	.43	.47	.60	.43	.61	.48
No. 5 comp.....gal.	.42	.46	.59	.42	.60	.47
23 a, spec.....gal.	.43	.55	.59½	.43	.61½	.48½
39 b, spec.....gal.	.51½	.61½	.63½	.51½	.71	.51½
40 m, spec.....gal.	.47	.58	.59	.47	.66½	.47
Isopropyl refd 98-99% drs .....gal.	1.30	1.60	1.60	1.25	1.50	1.25
Phenylethyl, 1 lb bot.....lb.	4.30	4.50	4.50	4.30	10.00	8.00
Aloin, USP, 100 lb cases....lb.	1.73	1.78	1.95	1.73	1.95	1.25
Aluminum Acetotartrate kegs .....lb.	...	1.60	1.60	1.60	1.60	1.60
Amidipyrine, 10 lb boxes....lb.	4.25	4.45	4.45	4.25	4.45	4.25
AMMONIUM, Acetate 100 lb kegs.....lb.	.38	.40	.40	.38	.40	.30
Benzoate, USP, 1 lb bot...lb.	...	1.27	1.27	1.27	1.27	1.27
Borate, 10 lb bot.....lb.	...	.35	.35	.35	.35	.35
Bromide, USP, 450 lb bbls. lb.	.43	.44	.49	.43	.50	.47
Imported, 112 lb boxes..lb.	.48	.50	.50	.48	.50	.48
Carb, USP, lump 100 lb kegs .....lb.	...	.13½	.13½	.13½	.13½	.13½
USP, powd 100 lb kegs..lb.	...	.14½	.14½	.14½	.14½	.14½
Citrate, 100 lb kegs.....lb.	.90	1.30	1.30	.85	.90	.85
Ichthyolate, as to brand..lb.	4.00	4.50	4.50	4.00	4.50	4.00
Iodide, USP, 25 lb jars...lb.	...	5.20	5.20	5.20	5.20	5.20
Phosphate, dibasic 250 lb bbls .....lb.	.48	.50	.50	.48	.50	.43
Salicylate, USP, 100 lb kegs .....lb.	1.15	1.20	1.20	1.15	1.20	1.15
Valerate, USP, 25 lb jars...lb.	2.75	2.90	2.90	2.75	2.90	2.75

{ Monthly Review }

Cod Liver Outlook

Cod liver oil continues firm at $27 @ $28 per barrel and stands out as one of the basically strong items. While large numbers of other natural raw materials have felt the effects of the general decline in commodity markets, this product has stood out as one of the strong points in an otherwise demoralized market.

The fact of the matter is that consumption of cod liver oil drug products continues to expand. Now that many manufacturers are busy promoting various improved brands of oil, with and without flavors and viosterol, the medical profession as well as the public is using cod liver oil in far greater proportion.

But the peak of sales promotion and consumption is far from here, for now manufacturers are starting vigorously to develop reputable cod liver oil concentrates. Within a short space of time two of these products—manufactured from cod liver oil—have been approved by the Council on Pharmacy and Chemistry of the American Medical Association. This puts the official approval of the medical profession upon products of this type. Heretofore, there was only one product thus sold. In addition another very reputable drug manufacturer is to begin marketing a concentrate during the coming month.

While the partial result of the sales promotional effort placed behind these products largely through the medical profession, will be to displace viosterol and plain liquid cod liver oil, the replacement of the plain cod liver oil will mean no decrease in the consumption of cod liver oil since the oil is necessary to produce the concentrates. Furthermore, the sales effort placed behind these products will mean greater publicity to the medical profession, to the retail drug trade and to the public on the whole subject of cod liver oil therapy. This will doubtless mean a greater per capita consumption of cod liver products during coming years and will doubtless mean a continuance of a steady market for the commodity produced here or imported from the various producing countries.

At the moment the local market is subject to some competition which has caused minor fluctuations in price, but nothing has occurred that would give any basis upon which to predict an easy market. Exports from Norway are lower this year being given at 65,799 barrels for the first ten months, compared with 83,665 barrels for the first ten months of 1929.

Citrate of Lime Weak

A cable dated October 4 from Naples (based on reports submitted by Consul R. R. Bradford, Messina and Vice Consul W. C. Lewis, Palermo) states that the citrate of lime situation remains unchanged with no improvement in sight. Demand continues weak. The present price is 475 lire per metric quintal (basis 64 per cent. citric acid). (Current value of lira = $0.0523 United States currency.)

Glycerine remains steady at prevailing levels. Spot quotations of 13c per lb. for C. P. have remained unchanged for several months. Demand for this grade is reported as fair. The demand for radiator glycerine is increasing, however, as this grade is becoming increasingly important as an anti-freeze and the bulk of glycerine stocks are now moving into this field.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Amylene Hydrate, 1 lb bot..lb.	...	7.10	7.10	7.10	7.10
Antipyrine, USP, 100 lb cans.lb.	2.25	2.60	3.00	2.25	3.00	1.53
Apomorphine Hydrochloride, ½ oz. vials.....oz.	22.60	22.70	22.70	22.60	22.70	22.60
Arecoline Hydrobrom, 1 oz vials .....oz.	7.75	8.75	8.75	7.75	8.75	7.75
Aspidospermine Amorphous..oz.	...	15.00	15.00	15.00	15.00	15.00
Atropine Alk, USP, 1 oz. vials .....oz.	6.50	7.00	9.10	6.50	9.10	7.00
Methyl bromide, 1 oz vials.oz.	...	25.00	25.00	25.00	25.00	25.00
Sulfate, 5 oz cans.....oz.	...	2.50	3.00	2.50	3.00	3.00
Single ounce.....oz.	...	3.00	3.15	3.00	3.15	3.15
Barium Iodide, 5 lb box.....lb.	...	5.15	5.15	5.15	5.15	5.15
Sulfate, X-ray diagn bbls..lb.	.09½	.10	.10	.09½	.10	.09½
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.75	.80	.90	.75	.90	.85
Domestic syn. 50 gal bbl..gal.	.70	.75	.75	.70	.75	.70
St. Thomas, 50 gal bbls...gal.	.80	.90	.90	.80	.90	.80
Benzonaphthol, 5 lb boxes...lb.	2.50	2.60	2.60	2.50	2.60	2.50
Benzoyl Cholride, 500 lb dr..lb.	1.00	1.05	1.05	1.00	1.00	1.00
Benzyl Benzoate, Medicinal FFC.....lb.	1.20	1.40	1.40	1.20	1.40	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35	.35	.30	.35	.30
Formate, 1 lb bot.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Succinate, 160 lb cby.....lb.	...	5.25	5.25	5.25	5.25	5.25
BISMUTH, metal 100 lb cases .....lb.	...	1.10	1.70	1.10	1.70	1.70
Ammon. Citrate, USP, 5 lb cans.....lb.	...	3.25	5.50	3.25	5.50	5.50
Betanaphthol, 5 lb box.lb.	...	2.90	3.10	2.90	3.10	3.10
Citrate, USP, 5 lb cans....lb.	...	2.60	2.75	2.60	2.75	2.75
Chloride.....lb.	...	3.00	3.15	3.00	3.15	3.15
Hydroxide.....lb.	...	2.90	3.05	2.90	3.05	3.05
Nitrate, 25 lb jars.....lb	...	1.25	1.80	1.25	1.80	1.80
Oxide anhydrous.....lb.	...	3.25	3.40	3.25	3.40	3.40
Oxychloride, 25 lb boxes...lb.	...	2.95	3.10	2.95	3.10	3.10
Salicylate, 25 lb boxes.....lb.	...	1.65	1.80	1.65	1.80	1.80
Subcarbonate, USP, 25 lb boxes.....lb.	1.70	1.75	2.20	1.70	2.20	2.20
Subcarbonate, X-ray diag 1 lb. bot.....lb.	2.65	2.72	3.45	2.65	3.45	3.45
Subgallate, USP, 25 lb boxes .....lb.	1.75	1.80	2.50	1.75	2.50	2.50
Subiodide, 5 lb lots.....lb.	...	4.10	4.25	4.10	4.25	4.25
Subnitrate, USP, 25 lb jar.lb.	1.35	1.40	1.60	1.35	1.65	1.58
Subsalicylate, USP, 25 lb boxes.....lb.	2.55	2.60	2.90	2.55	2.90	2.90
Tannate.....lb.	...	2.30	2.65	2.30	2.65	2.65
Borax, crys USP, 400 lb bbls.lb.	...	.06	.06	.06	.06	.03½
Bromoform, USP, 5 lb bot cases .....lb.	1.65	1.90	1.90	1.65	1.90	1.65
Butylchloral Hydrate bot....lb.	4.00	5.00	5.00	4.00	5.00	4.00
Cadmium iodide, 10 lb bot...lb.	...	4.55	4.55	4.55	4.55	4.45
CAFFEINE Alk, USP, 1..... 100 lb kegs.....lb.	2.45	2.50	2.80	2.75	2.95	2.45
Citrated, 50 lb cans.....lb	2.20	2.45	2.60	2.20	2.60	2.00
Hydrobromide, 1 lb bot...lb.	4.80	5.00	5.00	4.80	5.00	4.80
Hydrochloride, 1 lb bot...lb	6.05	6.55	6.55	6.05	6.55	6.05
Sulfate, 1 lb bot.....lb.	5.40	5.90	5.90	5.40	5.90	5.40
Sodium Benzoate, tins....lb.	...	3.05	3.05	3.05	3.05	3.05
Salicylate, tins.....lb.	...	2.95	2.95	2.95	2.95	2.95
Calcium Bromide, 100 lb cs..lb.	...	.60	.60	.60	.60	.60
Carb, USP, 175 lb bbls....lb.	.05	.06	.06½	.04½	.06½	.04½
Glycerophos, 250 lb bbls...lb.	...	1.40	1.40	1.40	1.40	1.40
Hypophos, USP, 25 lb cans lb.	.60	.65	.65	.60	.65	.60
Iodide, 5 lb bot.....lb.	...	4.85	4.85	4.35	4.35	.35
Lactate, USP, 500 lb bbls lb.	.45	.50	.50	.45	.50	.45
Lactophosphate Soluble...lb.	...	1.20	1.20	1.20	1.20	1.20
Powdered tins.....lb	...	1.00	1.00	1.00	1.00	1.00
Insol, powd tins.....lb.	...	.50	.50	.50	.50	.50
Sulfide, USP, 100 lb drs...lb.	.21½	.24	.24	.21½	.24	.21½
CAMPHOR, Jap. ref. slabs 100 lb. cases.....lb.	.60	.61	.64	.60	.64	.59½
Refined powd.....lb.	.62	.63	.66	.62	.66	.63
½ oz tab, 100 lb cases....lb.	.72	.73	.77	.72	.77	.73
Liniment, bbls.....gal.	2.20	2.30	2.30	2.20	2.30	2.20
Monobrom, 100 lb cases...lb.	1.85	1.90	1.90	1.85	1.90	1.85
Casein edible, 100 lb kegs...lb.	.45	.55	.55	.45	.55	.45
Charcoal Animal medicinal jars incl.....lb.	...	.50	.50	.50	.50	.50
Charcoal Wood, powd, 100 lb. bbls.....lb.	.06	.07	.07	.05½	.06	.05½
Chloroform, USP, 50 lb drs...lb.	.25	.27	.27	.25	.30	.25
Chloral Hydrate, USP, 25 lb jars.....lb.	.78	.80	.80	.75	.80	.75
100 lb drums.....lb.	.73	.75	.75	.55	.75	.70
Cholesterin.....oz.	5.50	5.85	5.85	5.50	5.85	5.50
Chromium Sulfate Scales, tins .....lb.	.45	.50	.60	.45	.60	.55
Powdered tins.....lb.	.50	.55	.65	.50	.65	.60
Chrysarobin, 50 lb tins.....lb.	3.75	4.10	4.10	3.75	4.25	3.75
Cinchonine Alk, 100 oz tins.oz.	...	.38	.38	.38	.38	.38
Crystal.....oz.	.43	.46	.46	.43	.68	.65
Sulfate, 100 oz tins.....oz.	...	.25	.25	.25	.25	.25
Cinchonidin Sulfate, 100 oz tins .....oz.	.35	.35	.35	.35	.35	.35
Cincophen, U.S.P. bbls.....lb.	3.25	...	...	...	...	...
boxes, drms., kegs.....lb.	3.35	3.50	...	...	...	...
Cocaine Alk, USP, 1 oz vial..oz.	...	11.07	11.07	11.07	11.07	11.07
Hydrochloride, USP,.....oz.	...	8.50	8.50	8.50	8.50	8.50
CODEINE Alk, 1 oz vials, 10 lots.....oz.	...	11.87	11.87	11.87	11.87	10.37
Hydrobromide.....oz.	...	8.92	8.92	8.92	8.92	8.92
Hydrochloride.....oz.	...	10.87	10.87	10.87	10.87	9.87
Nitrate, oz vl 10 oz lots....oz.	...	9.80	9.80	9.80	9.80	8.30
Phosp. oz vl, 10 oz lots....oz.	...	9.42	9.42	9.42	9.42	7.92
Salicylate.....oz.	...	8.25	8.25	8.25	8.25	6.75
Sulfate, oz vl, 10 oz lots...oz.	...	9.67	9.67	9.67	9.67	8.42

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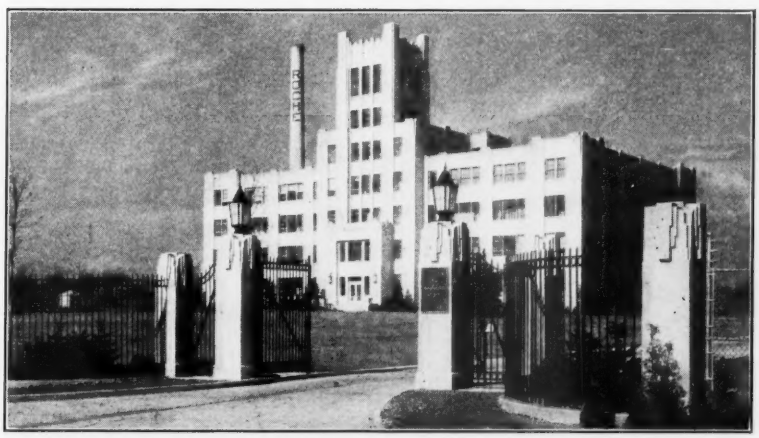

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{ *Monthly Review* }

Iodine Products Barely Steady

Iodine products continue without change although some reports are heard of shading of the recently established price of $3.50 per pound for potassium iodide. Iodine production in this country continues to expand although thus far the domestic material has gone into the hands of one manufacturer of iodides. It is reported that other domestic companies are to commence operations shortly in the production of iodine from oil well brines, and it is thought likely that some other manufacturers of potassium and other iodides will have domestic supplies.

No action has as yet been taken with reference to the removal of the export tax placed upon iodine by Chile. However, this step may be taken shortly with the result that cheaper iodine will be available for manufacturer of iodides.

Tincture of iodine is priced at unchanged figures which apparently indicate little or no profit on the item. In addition to this repeated report of shading of the schedule are heard.

Iodine Sources

The principal iodine-producing countries, apart from Chile—Japan, France, Java, Italy, Great Britain, Norway, and United States—produce from 20 to 25 per cent. of the total production, leaving the rest to Chile, whose production was 994 tons in 1928 and 1,387 tons in 1929, the export figures for these years being 787 tons and 1,188 tons respectively. The last price fixed by the Chilean Association of Iodine Producers for general sales is £1 15s. 3½d, per kilo.

Menthol Points Easy

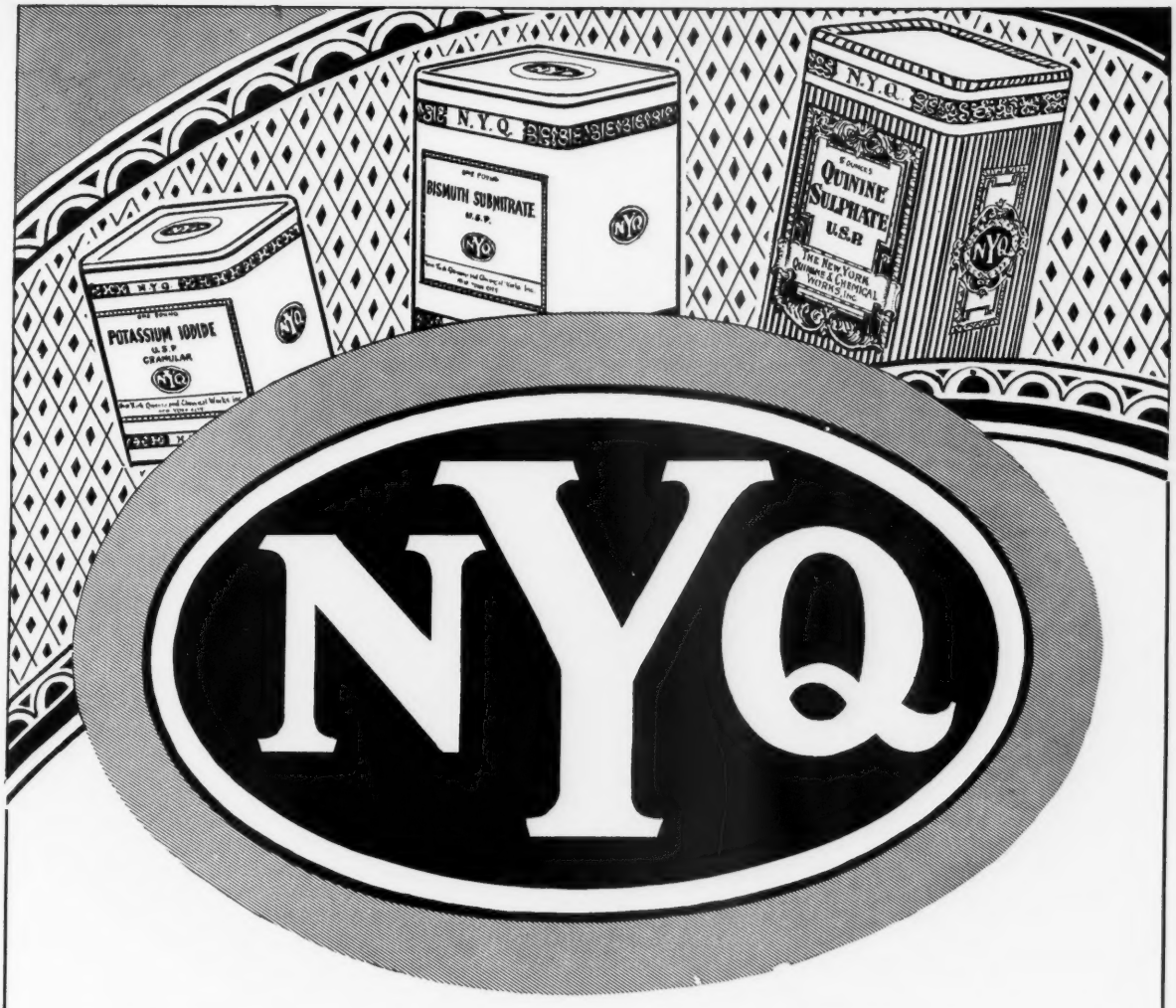
While the spot menthol market is fairly steady with prices quoted at $4.00 @ $4.15 per pound, the market is not in a strong position and rather tends to the weak side. As a matter of fact the prices quoted have been shaded on occasions by 10c per pound. The main cause of the easy tone in the market, however, lies in the low prices quoted for shipment. Some importers here have taken on large commitments for December and January. These goods have been sold at a price considerably below what the present spot market would indicate, and should upon arrival materially weaken the price structure here. It is possible that the situation abroad may strengthen before this material arrives, however.

Phenolphthalein Cut 10c

Phenolphthalein has been reduced sharply and is now being offered at from $1.00 to $1.10 per lb. in 100 lb. drums. This represents a reduction of 10c per lb. A reasonably active demand for spot goods is reported but competition in this item, as in many others, has been particularly pronounced.

Precipitated chalk is fairly firm at prevailing levels. A satisfactory volume of business is reported and, although competition in this item is noticed it has not been of a nature to case uneasiness to producers.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Colchicino Alk, USP, 1 oz vl.oz.	...	20.00	20.00	20.00	20.00
Salicylate, 1 oz vls.....oz.	...	35.50	35.50	35.50	35.50
Cream Tartar, USP, 300 lb bbls .....lb.	.25¾	.26	.27¾	.25¾	.28	.26¼
Imp. powd. 224 lb bbls....lb.	.25¼	.25¾	.25¾	.25¼	.27	.25¾
Creosote, USP, 42 lb cbys....lb.	.45	.47	.47	.40	.42	.40
Carbonate, 150 lb.....lb.	1.50	1.60	1.60	1.50	1.60	1.50
Cresol, USP, 400 lb drums...lb.	...	.20	.20	.20	.20	.20
500 lb drums.....lb.	.14	.17	.20	.14	.20	.20
DIGITALIN Pure, 1 oz vial.oz	15.00	15.50	15.50	15.00	15.50	15.00
Dover's Powder, USP, 5 lb tin .....lb.	2.75	2.80	2.80	2.45	2.50	2.45
Duboisine Sulfate, 1 oz vl....oz.	35.00	40.00	40.00	35.00	30.07	30.07
Emetine Alk, 15 gr vial.....oz.	...	.85	.85	.85	.85	.85
Hydrochloride, USP, 1 oz vl .....oz.	25.00	26.00	36.00	25.00	36.00	35.00
15 grain vials.....oz.	2.50	2.70	2.70	2.50	2.70	2.50
Epsom Salts, USP, 200 lb bbls .....100 lb.	2.25	2.50	2.50	2.25	2.50	2.25
Imp. 100 lb bbls.....100 lb.	2.30	2.35	2.35	1.95	2.00	1.95
Ergotin Bonjean, 1 lb jars...lb.	18.50	19.00	19.00	18.50	19.00	18.50
Eserine Alk, 1 oz vials.....oz	...	50.00	50.00	50.00	50.00	50.00
Salicylate, 1 oz vials.....oz.	...	40.00	40.00	40.00	40.00	40.00
Sulfate, USP, VIII 1 oz vials .....oz.	...	40.00	40.00	40.00	40.00	40.00
ETHER, USP, 55 lb drums..lb.	...	.12	.18	.12	.18	.18
Anaesthesia, 55 lb drums..lb.	.21	.23	.23	.21	.23	.23
Nitrous, 1 lb bot.....lb.	...	.80	.98	.80	.98	.80
Ethyl Chloride, 200 lb bot...lb.	.22	.24	.24	.22	.24	.22
Ethyl Iodide, 5 lb bot.....lb.	...	6.25	6.25	6.25	6.25	6.25
Formaldehyde, USP, 100 lb cbys 1c-1 wks.....lb.	.09	.09½	.10¾	.09	.10¾	.09¾
Gall Extract.....lb.	.20	.21	.21	.20	.21	.20
GLANDULAR SUBSTANCES						
Duodenal Substance, 1 lb lots	...	5.50	5.50	5.50	...	...
Liver Substance (Hepatic) 1 lb lots.....	...	4.50	4.50	4.50	...	...
Orchic Substance (Testicular)	...	4.75	4.70	4.75	...	...
Ovarian Substance, whole, 1 lb lots.....	...	26.00	26.00	26.00	...	...
Ovarian Residue, 1 lb lots....	...	20.00	20.00	20.00	...	...
Pituitary Substance, whole 1 lb lots.....	...	40.00	40.00	40.00	...	...
Pituitary Substance, Anterior Lobe, 1 lb lots.....	...	27.00	27.00	27.00	...	...
Thyroid, U. S. P., 1 lb lots...	...	4.75	4.75	4.75	...	...
Oxgall Powder, 1 lb lots....	...	1.35	1.35	1.35	...	...
GLYCERIN, CP, 550 lb drums .....lb.	...	.13	.14	.13	.15½	.13
Gold Chloride, bottles.....oz.	12.00	12.50	12.50	12.00	12.50	12.00
Guaiacol, liq. USP. 100 lb. cbys.....lb	1.65	1.75	1.75	1.65	1.75	1.65
Crystals.....lb	2.25	2.50	2.50	2.25	2.50	2.25
Benzoate, 1 lb bottles.....lb.	...	13.00	13.00	13.00	13.00	13.00
Carbonate, 5 lb boxes.....lb.	1.70	2.50	2.50	1.70	2.50	1.70
Halazone, 5 lb bot.....lb.	2.75	3.25	3.25	2.75	3.25	2.75
Hexamethylenetetramine, USP, 100 lb dr.....lb.	.46	.47	.56½	.46	.62½	.48
Homatropine Hydrobrom USP. .....oz.	...	14.50	14.50	14.50	14.50	14.50
5 oz and 1 oz vials.....oz.	...	13.50	13.50	13.50	13.50	13.50
Hydrastine Alk, USP, 1 oz vial .....oz.	20.50	21.00	21.00	20.50	21.00	20.50
Hydrochlide, USP, 1 oz vials .....oz.	20.50	21.00	21.00	20.50	21.00	20.50
Sulfate, 1 oz vial.....oz.	22.50	23.00	23.00	22.50	23.00	22.50
Hydrastinine Hydrochloride, USP, 15 gr vials.....oz.	...	40.00	40.00	40.00	40.00	40.00
Hydrogen Peroxide, USP, soln 375 lb bbls.....lb.	.03½	.04½	.04½	.03½	.04½	.03½
Hyoscine Hydrobrom, USP, 1 oz vials.....oz.	...	35.00	35.00	13.57	13.57	13.57
5 oz, 1 oz vials.....oz.	13.07	13.57	13.57	13.07	13.57	13.57
Hyoscyamine Alk, crystals, 1 oz vials.....oz.	...	25.07	25.07	25.07	25.07	25.07
Amorphous, 1 oz vial...oz.	...	75.07	75.07	75.07	75.07	75.07
Hydrobromide, USP, 1 oz vial .....oz.	...	25.00	35.07	25.00	35.07	35.07
Sulfate, 1 oz vial.....oz.	...	25.07	25.07	25.07	25.07	25.07
Hypoquinone, 100 lb kegs...lb.	...	1.20	1.25	1.20	1.25	1.20
ICHTHYOL, tins.....lb.	4.00	4.25	4.25	4.00	4.25	4.00
Iodide Arsenous, 5 lb bot .lb.	...	5.20	5.20	5.20	5.20	5.20
Arsenous-Mercuric soln, 5 lb bot.....ql	...	.26	.26	.26	.26	.26
Iodine, crude, 200 lb kegs...lb.	4.35	4.35	4.35	4.35	4.35	4.35
Resublimed, 10 lb tars....lb.	4.65	4.70	4.70	4.65	4.70	4.65
Tincture demis.....gal.	...	4.85	4.85	4.50	4.80	4.50
Iodoform, powd 10 lb bot...lb.	...	6.50	6.50	6.00	6.00	6.00
Iron & Ammonium Citrate, USP, 50 lb cans.....lb.	.65	.66	.66	.65	.66	.64
Chloride, USP, lump 400 lb bbls.....lb.	.06	.08	.08	.06	.08	.06
Citrate, USP, VIII 25 lb can .....lb.	.94	1.01	1.01	.94	1.01	.94
Hypophosphite, 5 lb cans..lb.	1.55	1.65	1.65	1.55	1.65	1.55
Iodide, 1 lb bottles.....lb.	...	4.28	4.28	4.28	4.28	4.28
Phosphate, USP, 50 lb cans .....lb.	...	.69	.69	.69	.69	.69
& Potas Oxalate, 250 lb bbl .....lb.	...	.45	.45	.45	.45	.45
Pyrophosphate, USP, 50 lb .....lb.	.74	.80	.80	.74	.80	.74
& Sod Oxalate, 24 lb box...lb.	...	.30	.30	.30	.30	.30
Sulfate, USP, crys bbls....lb.	.04	.04¼	.04¼	.04	.04	.04¼
Ferrous dried bbls.....lb.	...	.08	.08	.08	.08	.08
Valerate, tins.....lb.	2.75	3.00	3.00	2.75	3.00	2.75



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Cinchonine
Cinchona Alkaloids
Cinchophen
Codeine Sulphate
Codeine Phosphate
Cinchonidine
Morphine Sulphate
Ethyl Morphine
Iodoform
Glycerophosphates
Opium
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{ Monthly Review }

Mercury Continued to Drop

Mercury metal has experienced another sharp decline during the past month and is now offered at $109 to $112 per flask. This is a new low price for this year and represents a decline from the high of $124.50.

Stocks in the hands of producers have been increased considerably by the general lack of demand and a sharp increase in competition has been noted. It is reported that 400 flasks have been taken by large consumers during the past month and this has helped the situation somewhat but conditions are still rather acute.

It was decided at a recent meeting held by Mercuro Europeo that the current price of $126.50 a flask will be maintained, the European factors believing that they will have little difficulty in getting this price when the demand becomes more active. It is certain they will obtain no business in this market at the above price.

One encouraging factor in the situation is the fact that during the very cold weather some of the western mines close down so that in about two months time production should be curtailed somewhat.

Santonin Imports

General imports of santonin into the United States during the first nine months of the current year amounted to 1,511 pounds. The United Kingdom was the principal source accounting for 1,374 pounds, followed by Germany with 126 pounds.

Quinine Unchanged

Quinine and its salts remain in fairly moderate demand without apparent change in price levels. Reports continue to be heard of the activity of those outside the Kina Bureau who might have supplies of quinine in the near future but in the meanwhile nothing new appears on the surface. It seems quite likely that large sellers will maintain schedule prices although small lots of outside material may find their way into consumers hands. The fact of the matter is that consumers of any sizable quantity of quinine would hesitate to tie up with any outside source for all their supplies due to the feeling that they might have interruptions in their deliveries.

Mexican Vanilla Firm

A rather good demand for Mexican vanilla beans is reported. Prices for this grade of beans still continues very firm and high. Stocks have become rather depleted so that no concessions whatever are made or expected.

Bourbon beans are in plentiful supply and continue at low levels.

Trading in paprika has been in a small way. Spot prices are practically unchanged and it is reported that there is not, as yet, very large quantities of new crop here. Spanish sellers have raised their asking price and give the recovery of the Spanish currency as the reason. There is no lack of this commodity in Spain and buyers here are assuming an indifferent attitude and awaiting results.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Jalap Resin, USP lumps, 5 lb tins lb.	...	4.00	4.00	4.00	4.00
Powdered, tins lb.	...	4.65	4.65	4.65	4.65
Lead Acetate, USP, 100 lb kegs lb.	.16½	.19½	.18	.15	.19½	.15
Iodide, USP, VIII 5 lb bot lb.	3.20	3.40	3.40	3.20	3.40	3.20
Lecithin, 5 oz jars oz.	1.00	1.30	1.30	1.00	1.30	1.00
Licorice Ext Mass, cases lb.	.19	.20	.20	.19	.20	.14
Compound powder, bbls lb.	.11	.13	.13	.11	.13	.11
LITHIUM CARBONATE, 250 lb bbls lb.	1.35	1.45	1.60	1.35	1.60	1.50
Citrate, USP, 100 lb kegs lb.	...	1.70	1.70	1.70	1.70	1.70
Iodide, 5 lb bottles lb.	...	5.65	5.65	5.40	5.40	5.40
Lobeline Sulfate, ¼ oz vial oz.	...	8.75	8.75	8.75	8.75	8.75
Magnesium Carbonate, USP, 100 lb bbls lb.	.08	.09	.10½	.08	.12	.10½
English, oz blocks oz.	.16	.18	.18	.16	.18	.16
Glycerophosphate, 5 lb tins lb	3.20	3.25	3.25	3.20	3.25	3.20
Hypophosphite 5 lb cans lb	1.15	1.20	1.20	1.05	1.05	1.05
Salicylate, 100 lb kegs lb	...	1.10	1.10	1.10	1.10	1.10
Stearate, bbls lb.	.23	.25	.25	.23	.25	.23
Manganese Glycerophosphate, 5 lb tins lb.	2.90	3.00	3.00	2.90	3.00	2.90
Hypophosphite, USP, VIII 5 lb cans lb.	1.35	1.40	1.40	1.35	1.40	1.35
Iodide, 1 lb bottles lb.	6.40	6.65	6.65	6.40	6.65	6.40
MENTHOL, USP, 60 lb cases lb.	4.00	4.15	4.50	3.85	6.00	4.35
Synthetic, cases lb.	3.00	3.25	3.25	3.00	3.25	3.00
Mercury Metal, 75 lb flasks fl.	109.00	112.00	124.50	109.00	126.00	121.50
Bichloride, crys 25 lb box lb.	...	1.81	1.81	1.81	1.81	1.81
Gran powd, 100 lb kegs lb.	...	1.65	1.65	1.65	1.65	1.65
Bisulfate, 25 lb boxes lb.	...	1.62	1.62	1.62	1.62	1.62
Blue Mass, 25 lb boxes lb.	...	1.03	1.03	1.03	1.03	1.03
Powd, 25 lb boxes lb.	...	1.04	1.04	1.04	1.04	1.04
Blue Ointment, USP, 50%, 25 lb cans lb.	...	1.29	1.29	1.29	1.29	1.29
Mild 30%, 25 lb cans lb.	...	.92	.92	.92	.92	.92
33 1/3% mercury lb.	...	.94	.94	.94	.94	.94
Calomel, 50 lb boxes lb.	...	2.05	2.05	2.05	2.05	2.05
English lb.	2.75	2.80	2.80	2.75	2.80	2.75
Iodide, green, 25 lb jars lb.	...	4.80	4.80	4.80	4.80	4.80
Red, USP, 25 lb jars lb.	...	4.89	4.89	4.89	4.89	4.89
Yellow, USP, VIII, 25 lb jars lb.	4.80	4.80	4.80	4.80	4.80	4.80
Red precip, USP, 25 lb boxes lb.	2.17	2.17	2.17	2.17	2.17	2.17
Powd., USP, 25 lb boxes lb.	2.17	2.17	2.17	2.17	2.17	2.17
White precip, USP, 25 lb boxes lb.	...	2.20	2.20	2.20	2.20	2.20
Powd., USP, 25 lb boxes lb.	...	2.25	2.25	2.25	2.25	2.25
Salicylate, 25 lb bot lb.	...	2.32	2.32	2.32	2.32	2.32
With chalk, USP, 25 lb boxes lb.	...	.93	.93	.93	.93	.93
Methanol, Pure Ic-Ldrs gal	...	.54	.57	.54	.57	.57
Methyl Salicylate, USP, 50 lb cans lb.	.40	.42	.42	.40	.45	.40
Methylene Blue, USP, med 5 lb cans lb	2.00	2.05	2.05	2.00	2.05	2.00
Milk powd, 150 lb bbls. lb.	.09	.12	.15	.09	.15	.14
MORPHINE Alk, 5 oz tin oz.	10.90	10.95	11.35	10.90	11.35	9.85
Acetate, 5 oz tins oz.	8.75	8.80	9.35	8.75	9.35	7.85
Hydrobromide, 5 oz tins, 10 oz lots oz.	8.75	8.80	9.35	8.75	9.35	7.85
Hydrochloride, 5 oz tins, 10 oz lots oz.	8.75	8.80	9.25	8.75	9.25	7.85
Ethyl Hydrochloride, 5 oz tins 10 oz lots oz.	...	10.85	10.85	10.85	10.85	9.35
Sulfate, 5 oz tins, 10 oz lots oz.	8.85	9.00	9.00	8.75	8.85	7.85
Naphthalene Flake, 175 lb bbls wks lb.	.04½	.05	.05	.04½	.05	.04½
Balls, 250 lb bbls wks lb.	.05½	.06	.06	.05½	.06	.05
Oxgall, Purified, 5 lb bot lb.	1.75	2.50	2.50	1.75	2.50	1.75
USP, 5 lb bot lb.	2.00	2.50	2.50	2.00	2.50	2.00
Oxyquinoline Sulfate, tins lb.	8.50	9.25	9.25	8.50	9.25	8.50
Pancreatin, USP, 100 lb lb.	...	1.90	1.90	1.90	1.90	1.90
Paraffin, refd, 200 lb cs slabs 118 -120 deg MP lb.	.08	.09	.09	.08	.09	.08
128 132 deg MP lb.	.07½	.07½	.07½	.07½	.07½	.07½
Para-Aldehyde, USP, 100 gal drums lb.	.67	.77	.77	.67	.77	.67
Pepsin, USP, 100 lbs. 1:3000 lb.	...	2.25	2.25	2.25	2.25	2.25
100 lbs. 1:6000 lb.	...	4.00	4.00	4.00	4.00	4.00
100 lbs. 1:10000 lb.	...	6.50	6.50	6.50	6.50	6.50
Peptone, powd, 5 lb bot lb.	...	...	...	...	...	...
PHENOLPHTHALEIN, USP, 100 lb drums lb.	1.00	1.10	1.20	1.00	1.20	1.10
5 lb cans 100 lb lots lb.	1.13	1.20	1.30	1.13	1.30	1.23
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots oz.	...	3.25	3.25	3.25	3.25	3.25
Nitrate, 25 oz lots oz.	...	3.25	3.25	3.25	3.25	3.25
Single ounce oz.	...	3.50	3.50	3.50	3.50	3.50
Alkaloid, 15 gr vials vl.	...	.75	.75	.75	.75	.75
Piperazine Hydrate, 1 lb bot lb.	...	15.00	15.00	15.00	15.00	15.00
Piperadine, 25 oz bottles lb.	...	8.00	8.00	8.00	8.00	8.00
Popodhyllin 5 lb bottles lb.	4.35	4.50	4.50	4.35	4.50	4.35
Potassium Acetate, USP, 100 lb kegs lb.	.29	.30	.30	.29	.30	.29
Bicarb, USP, crys 320 lb bbls lb.	.09½	.10	.13½	.09½	.13½	.08½
Bromide, USP, crys 100 lb cs lb.	.37	.38	.43	.37	.40	.39
Citrate, USP, 50 lb bbl lb.	.51	.53	.53	.51	.55	.51
Guaiacol Sulfonate lb.	1.95	2.25	2.25	1.95	2.25	1.95

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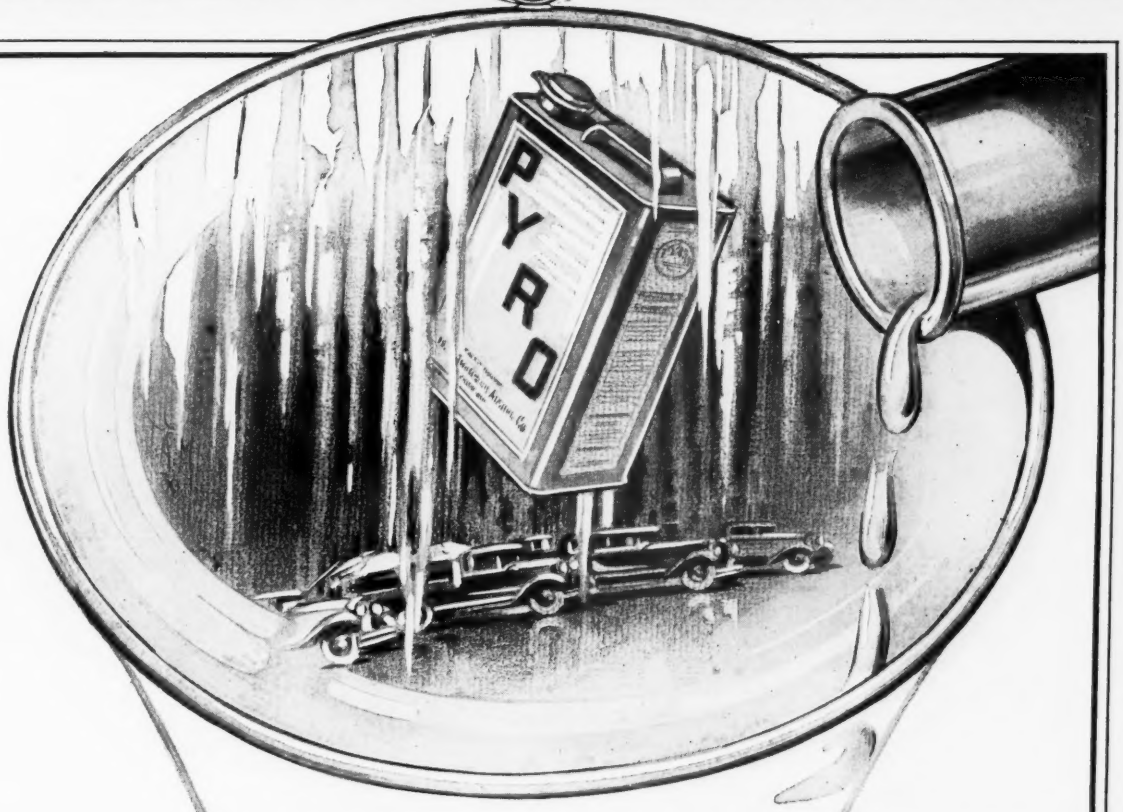

Pyro—and the phrase it banished

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• • •

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{ *Monthly Review* }

Will Vanilla Be Stabilized?

Means of protecting those interested in Bourbon vanilla beans from the demoralized state of the market are being advocated by those close to the situation in France. Recently a factor in Marseille, France, outlined the situation. The following information is taken from this communication.

The suggestion made is for the suppression of a crop of vanilla made possible by an agreement between the French government and syndicates of planters, merchants and brokers. The state of over-production is outlined as follows:

	Tons
4 crops, 1919 to 1923, about 500 tons each (These were absorbed normally)	2,000
2 crops, 1923, 1924, about 400 tons, each. (With a deficiency of 200 tons, prices rose from 70f. to 500f. and held average of 250-300f.)	800
3 crops, 1925-26, 1926-27, 1927-28, were respectively 650, 550, and 800 tons	2,000
One crop, 1928-29, exceeded 1,200 tons	1,200
Crop of 1929-30 reached	800
The eleven crops totaled	6,800

Since stocks on hand now total 600 tons, there was absorbed annually for the past eleven years since 1919, an average of more than 550 tons. Supply to-day is 600 tons in stock and a new crop of 700 tons; thus there is a surplus of 700 tons. This latest surplus is the result of the enormous plantations started in 1924-25, years of an average price of 300f. A plantation does not enter into consideration for 4 or 5 years, and for this reason no reduction in production can be anticipated before 1933-35. Present prices of 55 to 60f. represent about 40f. for the producer.

If no restrictive measures are taken, a rise in price will not be possible, and there is no means of guessing just how far prices will decline. But, if the present situation is left to find its own outcome it will mean a forced abandonment of plantations in spite of all the losses in effort and investment that the growers will suffer. Such a course will mean fatal cessation of the culture of vanilla when this product, exclusive to the French colonies, should be a source of great profit.

The suppression of a crop would mean prohibition for a definite period of one year, of the fertilization of flowers (if injury is not done to the plants) or of preparation of green vanillas, which must be destroyed.

This method would naturally be desired by merchants who have large holding of vanilla upon which abnormal losses will have to be taken if no steps are taken. The broker will likewise be interested since he earns more at higher prices. And even the producer should be willing to suppress a crop since he will obtain for his present goods twice the value that he would receive for it if the situation was not stimulated by some means.

The communication states that half of the French production of vanilla, if not two-thirds, is consumed in the United States. This country is paying to-day 10 to 12 gold Fr. These consumers would probably be willing to pay more than present prices if they could be assured of a steady supply of vanilla of good quality such as the suggested method of control would assure.

The over-produced condition has resulted in vanilla being poorly gathered, poorly prepared, and in all has not been conducive to the production of a fine product such as the consumer has a right to expect.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Potassium Hypophosphite, 10 lb. cans lb.	.80	.85	.80	.85	.80
Iodide, USP, 100 lb cases lb.	3.50	3.55	3.25	3.55	3.25
Lactophosphate, 4 oz bot lb.	...	.90	.90	.90	.90
Permangan, USP, crys, 100 lb drs wks lb.	.15	.15½	.15½	.15	.15½	.15
Phosphate dibasic pure, kegs lb.	...	.49	.49	.49	.49	.49
Salicylate, 25 lb cans lb.	...	1.18	1.18	1.18	1.18	1.18
Sulfate, USP, VIII, 100 lb kegs lb.	.13	.15	.15	.13	.15	.13
Sulfocyanide, CP 15 lb jars lb.	...	.50	.50	.50	.50	.50
Tartrate, CP, tins lb.	...	.65	.65	.65	.65	.65
Pyrogallol, USP, see Acid Pyrogallic	...	...	...	...	...	...
Quinidine Alk, 100 oz tins oz.	.70	.75	.75	.70	.75	.70
Sulfate, 100 oz tins oz.	...	.50	.50	.50	.50	.50
QUININE SULFATE, USP, 100 oz tins oz.	...	.40	.40	.40	.40	.40
1 oz tins, 100 oz lots oz.	...	.47	.47	.47	.47	.47
Dutch, 100 oz tins oz.	...	.40	.40	.40	.40	.40
Java, 100 oz. tins oz.	...	.40	.40	.40	.40	.40
Japanese 100 oz tins oz.	...	.40	.40	.40	.40	.40
Acetate oz.	...	.74	.78	.74	.78	.78
Arsenate oz.	...	.76	.78	.76	.78	.78
Benzoate oz.	...	.74	.78	.74	.78	.78
Bisulfate, USP oz.	...	.40	.40	.40	.40	.40
Resale oz.	...	.39	.39	.39	.39	.37
Citrate oz.	...	.51	.51	.51	.51	.51
Dicarbonate, 1 oz tins oz.	...	2.56	2.56	2.56	2.56	2.56
Dihydrobromide oz.	...	.54	.54	.54	.54	.54
Dihydrochloride, USP oz.	...	.54	.54	.54	.54	.54
Ethyl Carbonate, 16 oz tins oz.	...	.70	.70	.57	.58	.58
Ferrocyanide oz.	...	.74	.78	.74	.78	.78
Formate oz.	...	.73	.73	.73	.73	.73
Glycerophosphate oz.	...	.72	.80	.72	.80	.80
Hydrobromide, USP oz.	...	.50	.50	.50	.50	.50
Hydrochlorosulfate oz.	...	.50	.54	.50	.54	.54
Hydrochloride & Urea, USP oz.	...	.74	.74	.74	.74	.74
Hypophosphite oz.	...	.70	.70	.70	.70	.70
Lactate oz.	...	.66	.66	.66	.66	.66
Phenolsulfonate oz.	...	.78	.78	.78	.78	.78
Phosphate oz.	...	.62	.62	.62	.62	.62
Salicylate, USP oz.	...	.52	.52	.52	.52	.52
Tannate, USP oz.	...	.41	.41	.41	.41	.41
Tartrate oz.	...	.74	.78	.74	.78	.78
Valerate oz.	...	.78	.78	.78	.78	.78
& Urea Hydrochloride, USP oz.	...	.88	.88	.88	.88	.88
Rennet, N. F. 5 lb 1:25,000 lb.	2.95	3.50	2.95	3.50	2.95
Resorcinol, USP, 25 lb cans lb.	1.82	1.87	1.97	1.60	1.75	1.65
Rochelle Salt, USP, 225 lb bbl lb.	.19	.19½	.23½	.19	.23½	.23
Imp. USP, 300 lb bbls lb	...	.23	.23	.23	.23	.23
Rock Sugar, 5 lb boxes lb.	...	.15	.15	.15	.15	.15
Saccharin, USP, 10 lb cans lb.	1.70	1.80	1.80	1.70	1.80	1.70
USP, Soluble, 10 lb cans lb.	1.75	1.85	1.85	1.75	1.85	1.75
Salicin, USP lb.	...	12.50	12.50	9.31	9.31	4.86
SALOL, USP, 100 lb drums lb.	...	.90	.90	.90	.90	.90
Saltpetre, powd, bbls wks lb.	.06½	.08½	.08½	.06½	.08½	.06½
Santonin, USP, bulk lb.	123.00	133.00	133.00	129.50	129.50	129.50
Saponin, refined lb.	1.30	1.50	1.30	1.50	1.30	1.30
Siedlitz Mixture, 250 lb bb. lb.	...	.17½	.17½	.17½	...	...
Silver Metal, American oz.	...	.42½	.57½	.42½	.57½	.57½
Iodide, 16 oz lots oz.	...	.69	.69	.69	.69	.69
Nitrate, 100 oz bottles oz.	.32½	.34½	.42½	.32½	.42½	.40½
Nucleinate, bulk oz.	...	.37	.37	.37	.37	.37
Proteinate oz.	.39	.41	.41	.32	.32	.32
SODIUM BENZOATE, USP, 100 lb bbls lb.	.45	.49	.49	.45	.49	.45
Bromide, USP, 100 lb kegs lb.	.37	.38	.43	.37	.43	.42
Cacodylate, USP, 25 lb bot lb.	4.75	5.90	5.90	4.75	5.90	4.75
Citrate, USP, X 50 lb kegs lb.	.45	.47	.47	.45	.47	.45
USP VIII, 50 lb kegs lb.	.38	.40	.40	.38	.40	.38
Glycerophosphate, USP, crys 25 lb cans lb.	1.40	1.55	1.55	1.40	1.55	1.40
Powder, 25 lb tins lb.	1.45	1.60	1.60	1.45	1.60	1.45
Soln, USP, 25 lb tins lb.	1.05	.120	1.20	1.05	1.20	1.05
Hypophosphite, USP, 25 lb cans lb.	.70	.75	.75	.70	.75	.70
Iodide, USP, 25 lb jars lb.	4.25	4.30	4.30	4.25	4.30	4.25
Phosphate (Mono-Sodium), 100 lb kegs lb.	.30	.31	.31	.30	.31	.30
Di-Sodium USP, granular, 275 lb bbls lb.	.07½	.08	.08	.07½	.08	.07½
Pyrophosphate, 100 lb kegs lb.	...	.29	.29	.29	.29	.29
Salicylate, 100 lb kegs lb.	...	.47	.47	.47	.47	.47
Sulfocarbolate, USP, 100 lb kegs lb.	...	.25	.31	.25	.31	.31
Sulfocyanate, CP crys, jars included lb.	...	.60	.60	.60	.60	.60
Spartein Sulfate, USP, 25 oz bulk oz.	.65	.70	.70	.65	.70	.60
Single oz vial oz.	.77	.90	.90	.77	.90	.77
STRONTIUM BROMIDE USP, 50 lb kegs lb.	.46	.47	.52	.46	.52	.51
Carb, 100 lb kegs wks lb.	...	.20	.20	.20	.20	.20
Iodide, USP, 25 lb jars lb.	...	4.00	4.00	4.00	4.00	4.00
Lactate, kegs lb.	.90	1.10	1.10	.90	1.10	.90
Nitrate, 600 lb bbls NY lb.	.08	.08½	.08½	.08	.08½	.08
Imp. bbls NY lb.	.08	.08½	.08½	.08	.08½	.08
Salicylate, USP, 100 lb keg lb.	...	1.10	1.10	1.10	1.10	1.10

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{ Monthly Review }

The Eucalyptus Decline

Eucalyptus oil is easier at prices ranging from 38c to 41c per lb. in the spot market. There are several schools of opinion relative to the reason for the weakness in this oil, and there are several factors and recent developments to be considered in an effort to determine the possible future trend.

Eucalyptus is obtained from several species of wild trees in Australia. With the labor situation there being similar in its distressed position to that prevailing here, it is assumed that these unemployed go out into the woods and gather the leaves in large quantities, so that the raw material brought in is considerably out of proportion to the possible consuming demand.

In one of the foreign trade journals we read a note to the effect that the chief users of eucalyptus oil in Australia have been Broken Hill Companies in their flotation process for the recovery of silver. But these, it is stated, owing to the low price of silver, are about to close down and the distillation of eucalyptus oil will probably practically cease. We have been unable to verify this. In this country pine oil is used for flotation purposes and it is interesting to note that 75 per cent. of the pine oil produced here is so used. If the percentage of consumption in the silver mines in Australia would run anywhere near such a figure a tremendous consuming field for eucalyptus oil would suddenly cease to exist.

However, there are various species of eucalyptus. A. R. Penfold has examined many areas of these trees and is able to speak from first-hand knowledge. In a paper recently compiled he is quoted as saying that the importance of careful observation combined with chemical analysis is well illustrated by some of the Australian Eucalyptus of economic importance. Some of the species which yield cineol, such as E. polybractea (Blue Mallee), E. australiana (Black Peppermint), and E. sideroxyl on (Iron Bark) provide medicinal oils; others, such as E. citriodora and E. Macarthuri, yield valuable perfumery oils, while E. phellandra, the narrow-leaf peppermint, and E. dives, the broad-leaf peppermint, with a high phellandrene content, afford important industrial oils.

The oil used in flotation work is not, evidently, obtained from that specie from which the U.S.P. oil shipped to this country is obtained, and whether this oil can be distilled to meet the medicinal oil requirements is problematical. However, with the shut down to the mines in Australia there will remain large quantities of oil on the market that should indirectly if not directly affect the situation in all markets of the world.

There is also a new source for this oil, namely Japan. Oil for medicinal use is now coming in from Formosa in increasing quantities, considerable of it appearing in this market during the past several months. This oil apparently meets the requirements of the U.S.P., although there is again a difference of opinion on this point. There is evidently an element here that would like to see the Department of Agriculture take such action that would disbar this oil from the American market. Should it continue acceptable it would certainly be another factor for Australian distillers to contend with.

Another opinion would lead to the belief that eucalyptus oil has a better future in store for it. The price being now

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Strophanthin, USP, 1 oz vial	oz. 19.00	19.00	19.00	19.00	19.00
Crystals	lb. 75.00	75.00	75.00	75.00	75.00
Strychnine Alk, USP crys, 100 oz tins	oz. ...	.61	.66	.61	.66	.61
Powdered	oz. ...	.51	.56	.51	.56	.51
Acetate	oz. ...	.65	.65	.65	.65	.65
Arsenate, 25 oz cans	oz. ...	.65	.65	.65	.65	.65
Glycerophosphite, USP	oz. ...	.65	.65	.65	.65	.65
Hydrobromide	oz. ...	.65	.65	.65	.65	.65
Hydrochloride	oz. ...	.65	.65	.65	.65	.65
Hypophosphite	oz. ...	.75	.75	.75	.75	.75
Nitrate, USP	oz. .55	.72	.72	.55	.72	.55
Phosphate	oz. ...	.65	.65	.65	.65	.65
Sulfate, USP, powd	oz. ...	.42	.42	.42	.56	.42
Sugar, refined, 275 lb bbl 100 lb	5.80	5.90	5.90	5.80	5.90	5.80
Milk, USP, 200 lb bbls	lb. .18	.20	.20	.18	.20	.18
Sulfonethylmethane, USP, 10 lb boxes	lb. 3.85	4.05	4.05	3.85	4.05	3.85
Sulonmethane, USP, 10 lb box	lb. 2.65	3.85	3.85	2.65	3.85	2.65
Sulfur flwrs. washed, USP, 125 lb bbl	lb. ...	.06	.06	.06	.06	.06
Iodide, USP, VIII, 5 lb bot	lb. ...	4.55	4.55	4.55	4.55	4.55
TARTAR EMETIC, USP, 300 lb bbls	lb. .33	.35	.35	.29	.31	.29
Terebene, tins	lb. ...	.85	.85	.85	.85	.85
Terpin Hydrate, USP, 100 lb kegs	lb. .39	.41	.42	.39	.42	.40
Theobromine Alk, 5 lb cans	lb. 1.90	2.25	2.25	1.90	2.25	1.90
Sod. Salicylate, 1 lb bot	lb. ...	2.10	2.10	2.10	2.10	2.10
Sod. Benzoate, 1 oz vials	oz. ...	1.00	1.00	1.00	1.00	1.00
Thymol, USP, 25 lb tins	lb. 2.00	2.25	2.70	2.00	2.70	2.25
Iodide kegs	lb. 6.00	7.00	7.00	6.00	7.00	6.00
Veratrine Alkaloid	oz. ...	2.25	2.25	2.25	2.25	2.25
Sulfate, 1 oz vials	oz. ...	2.25	2.25	2.25	2.25	2.25
Witch Hazel Ext., 50 gal bbl	gal. .60	.80	1.00	.60	1.00	.80
Zinc Carb, USP, 100 lb keg	lb. .28	.31	.31	.28	.31	.28
Chloride, USP, 25 jars ex	lb. .24	.29	.29	.24	.29	.24
Iodide, 5 lb bottles	lb. ...	5.22	5.22	5.22	5.22	5.22
Oxide, USP, 100 lb bbls	lb. .13	.14	.17½	.13	.18	.16½
Stearate, USP, 50 lb bbl	lb. .24	.26	.27	.24	.26	.24
Sulfate, USP, 100 lb bbl	lb. .08	.09	.09	.08	.09	.08
Sulfocarbolate, 100 lb kegs	lb. .23	.26	.29	.23	.29	.23

Natural Derivatives

Anethol, 2 lb bot	lb. 1.90	2.15	2.50	1.90	1.30	1.25
Borneol, 1 lb bot	lb. 2.50	3.00	3.00	2.40	2.50	2.40
Carvol, 5 lb bot	lb. 3.60	4.00	4.00	3.50	3.60	3.50
Citral, 25 lb cans	lb. 2.65	4.00	4.00	2.65	2.75	2.70
Citronellal 1 lb bot	lb. 2.00	4.00	4.00	2.00	2.75	2.70
Eucalyptol, USP, 50 lb cans	lb. .85	.90	1.05	.85	1.05	1.00
Eugenol, USP, 25 lb cans	lb. 3.50	4.00	4.00	2.70	2.75	2.70
Geraniol, domestic, 50 lb cases	lb. 2.50	2.70	2.70	2.50	2.70	2.50
Imported, 5 lb bot	lb. 2.90	3.10	3.10	2.90	3.10	2.90
Iso-Eugenol, 1 lb bot	lb. 3.75	3.80	3.80	3.75	3.80	3.75
Imported, 1 lb bot	lb. 3.70	3.80	3.80	3.70	3.80	3.70
Linalol from Bois de Rose, 5 lb bot	lb. 3.00	5.00	5.00	3.00	3.25	3.20
Rhodinol, 1 lb bot	lb 6.25	20.00	20.00	6.25	7.75	7.50
Saffrol, drums	lb. .35	.37	.37	.27	.27	.27
60 lb cans	lb. .37	.39	.39	.29	.29	.29

Synthetic Aromatics

Acetophenene, CP, 1 lb bot	lb. 3.50	3.65	3.65	3.50	3.65	3.50
Aldehyde, C 8 (Otcyl) 1 lb bot	lb. ...	50.00	55.00	50.00	55.00	50.00
C 7, 1 lb bot	lb. 4.50	5.50	5.50	4.50	5.50	4.50
C 9 (Nonyl), 1 lb bot	lb. ...	140.00	140.00	140.00	140.00	140.00
C 10 (Decyl), 1 lb bot	lb. .	48.00	48.00	48.00	48.00	48.00
C 14, 1 lb bot	lb. .	32.00	32.00	32.00	32.00	22.50
C 16, 1 lb bot	lb. ...	24.00	24.00	24.00	32.00	24.00
Aubepine, see Anisic Aldehyde						
AMYL ACETATE, pure, 5 gal cans	gal. 5.50	6.85	6.85	5.50	6.85	4.75
Butyrate, 1 lb bot	lb. 1.25	1.50	1.75	1.25	1.75	1.70
Butyrate, 5 lb bot	lb. ...	1.00	1.75	1.00	1.75	1.75
Cinnamate, 5 lb bot	lb. 9.50	9.75	9.75	9.50	9.75	9.50
Formate, 1 lb bot	lb. ...	1.90	1.90	1.90	1.90	1.90
Formate, 5 lb bot	lb. ...	1.75	1.75	1.75	1.75	1.75
Phenyl Acetate, 1 lb bot	lb. 4.50	5.00	5.00	4.50	5.00	4.50
Salicylate, 100 lb cbys	lb. 1.25	1.30	1.30	1.25	1.30	1.25
Imported	lb. 2.25	2.50	2.50	2.25	2.50	2.25
Anisic Aldehyde, 1 lb bot	lb. 4.00	4.50	4.50	3.00	3.25	3.00
Benzaldehyde, USP, 40 lb cbys	lb. ...	...	...	...	...	...
50 lb cbys	lb. 1.45	1.55	1.55	1.25	1.35	1.25
FFC, 40 lb cbys	lb. 1.35	1.45	1.45	1.35	1.45	1.35
Benzoic Ether, see Ethyl Benzoate						
Benzophenone, 1 lb bot	lb. 4.50	5.00	5.00	4.50	5.00	4.50
Benzyl Acetate, 100 lb cbys	lb. .90	1.10	1.10	.90	1.10	.90
Alcohol, 5 lb bot	lb. 1.20	1.30	1.35	1.20	1.35	1.25
BENZYL BENZOATE	1.15	1.20	1.40	1.15	1.40	1.35
Medicinal, FFC	lb. ...	1.40	1.40	1.40	1.40	1.40
Buytrate, CP, 1 lb bot	lb. 9.25	9.50	9.50	9.25	9.50	9.25

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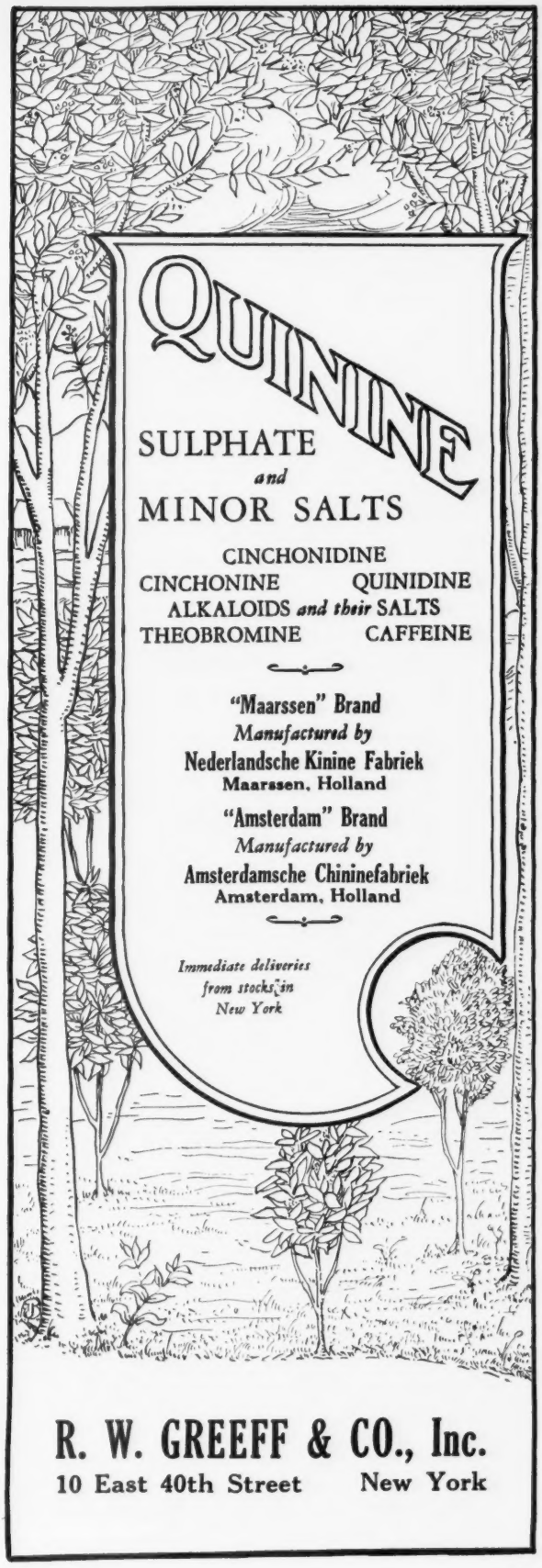

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{ Monthly Review }

at low levels, considerably below normal, in fact, should attract those manufacturers of eucalyptol who had changed to camphor as a raw material when eucalyptus was much higher priced. It is therefore logical to assume that these manufacturers would again use low priced eucalyptus as the yield of eucalyptol is much greater than found in camphor.

This source of opinion attributes the decline to the decrease of 10% in the tariff, together with the general business depression, and looks for a strengthening market for the future. It might here be in order to again quote from A. R. Penfold. He states that it may be of some interest to mention that the so-called industrial oils, like eucalyptus phellandra, dives, etc., are used extensively in Australia for the manufacture of cheap disinfectants for picture shows, theatres, etc., by incorporation in a soap solution. These preparations are rapidly ousting the coal-tar preparations from the market.

More Geranium Imported

The heavy increase in the exports of French geranium oil to the United States is very noticeable. In 1929 24,188 pounds, valued at $89,204, were received and in 1930, 47,819 pounds, valued at $139,115. The bulk of the oil is ordinarily used for the manufacture of soap. As will be seen from the following figures by far the greater proportion of the 1930 exports is Algerian oil: Algerian, 39,535 pounds, valued at $104,743; Bourbon, 7,645 pounds, valued at $27,548; and Grasse, 639 pounds, valued at $6,824. (Consul Robertson Honey, Nice, France.)

Cedarleaf is easier in undertone although the prevailing market price has not been reduced. Poor demand has prevailed on this commodity and there is a noticeable tendency to shade quotations below $1.00 per lb. Dealers are well supplied and rather anxious to move this oil.

Cedarwood is still in an exceedingly firm position. While no revision in price was noted during the past month it is reported that the small demand in the spot market is the one reason that the upward tendency has been arrested. Stocks in the hands of dealers are not large and they cannot be replaced until such time as production is resumed in the raw material field. Any increase in demand would certainly send this commodity to still higher levels.

Anise has experienced a sharp reduction during the past month. The U. S. P. oil is now offered at from 78c to 79c per lb. This compares with the prevailing price of $1.00 a month ago. The oil has been in ample supply to meet reduced requirements.

Bergamot, with new crop offerings lower, has again been reduced in the spot market. Quotations from $2.50 to $2.60 prevail with the possibility of still doing better. The primary market operators have shown a tendency to gather in contracts at the current market but as yet have not found the buyers here particularly enthusiastic. The tendency seems to be to let the decline run its course.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Benzyl Cinnamate, 1 lb bot. lb.	7.00	7.25	9.50	7.00	9.50	9.25
Formate, 1 lb bot. . . . . lb.	3.25	3.35	3.35	3.15	3.25	3.15
Propionate, 1 lb bot. . . . . lb.	3.60	3.75	3.75	3.60	3.75	3.60
Succinate, 1 lb bot. . . . . lb.	5.25	5.50	5.50	5.25	5.50	5.25
Valerate, 5 lb bot. . . . . lb.	3.00	3.25	3.25	3.00	3.25	3.00
Bornyl Acetate, 1 lb bot. . . . lb.	2.25	3.35	3.35	2.90	3.00	2.90
Bromstyrol, 25 lb cases. . . . . lb.	4.50	4.65	4.65	4.10	4.25	4.10
Butyl Anthranilate dom, 1 lb bot. . . . . lb.						
Butyric Ether, see Ethyl Butyrate.						
Cinnamic Acid, 5 lb cans. . . . lb.	3.25	3.50	3.50	3.25	3.50	3.25
Alcohol liquid, 1 lb bot. . . lb.	3.00	3.10	3.35	3.00	3.35	3.25
Crystallizable. . . . . lb.	7.00	8.00	8.00	7.00	8.00	7.00
Aldehyde. . . . . lb.	2.25	2.50	2.50	2.25	2.50	2.25
Imported, 1 lb bot. . . . . lb.	7.75	9.00	9.00	7.75	9.00	7.75
Citronelyl Acetate, 1 lb bot. . lb.	6.00	6.25	8.00	6.00	8.00	7.75
Coumarin, 25 lb cans. . . . . lb.	3.50	4.00	4.00	3.50	4.00	3.50
DECYL ALCOHOL. . . . . lb.	25.00	28.00	28.00	25.00	28.00	25.00
Diethyl Phthlate see Chemicals						
Diphenyloxide, 25 lb tins. . . . lb.	1.00	1.15	1.15	1.00	1.15	1.00
Diphenyl Methane. . . . . lb.	1.75	2.00	2.00	1.50	1.75	1.50
Duodecyl Alcohol. . . . . lb.	20.00	22.00	22.00	20.00	22.00	20.00
Ethyl Acetate, pure, 5 lb bot. lb.	.45	.50	.50	.45	.50	.45
Benzoate, 5 lb bot. . . . . lb.	1.50	1.75	1.75	1.50	1.75	1.50
Ethyl Butyrate, 5 lb bot. . . . lb.	1.80	2.00	2.00	1.80	2.00	1.80
Caproate, 1 lb bot. . . . . lb.	3.25	3.50	3.50	3.25	3.50	3.25
Cinnamate, 1 lb bot. . . . . lb.	4.00	4.50	4.50	4.00	4.50	4.00
Formate, 5 lb bot. . . . . lb.	1.00	1.25	1.25	1.00	1.25	1.00
Methyl Paracresol, 1 lb bot. . . . . lb.	3.25	3.50	3.50	3.25	3.50	3.25
Phenyl Acetate, 5 lb bot. . lb.	3.75	4.00	4.00	3.75	4.00	3.75
Valerate, 5 lb bot. . . . . lb.	...	3.75	3.75	3.75	3.75	3.75
Salicylate, 5 lb bot. . . . . lb.	1.95	2.00	2.00	1.95	2.00	1.95
Formic Ether see Ethyl Formate						
Geranyl Acetate, 1 lb bot. . . . lb.	3.00	3.05	3.25	3.00	3.25	3.20
Butyrate, 1 lb bot. . . . . lb.	13.00	13.50	13.50	13.00	13.50	13.00
Formate, 1 lb bot. . . . . lb.	12.00	12.50	12.50	12.00	12.50	12.00
Glyco Ester. . . . . lb.	1.00	1.10	1.10	.90	1.00	.90
Heliotropin, 100-10 lbs. . . . . lb.	1.65	1.75	1.75	1.65	1.75	1.65
Imported. . . . . lb.	1.95	2.05	2.05	1.95	2.05	1.95
Hydroxycitronellal, 1 lb. . . . . lb.	5.50	7.50	7.50	5.50	7.50	5.50
Indol, CP, 1 oz bot. . . . . oz.	2.90	3.00	3.00	2.90	3.00	2.90
IONONE, 1 lb bot 100%. . . lb.	5.00	6.00	6.00	5.00	6.00	5.00
Alpha. . . . . lb.	4.80	5.00	5.00	4.80	5.20	4.80
Beta. . . . . lb.	5.70	5.75	5.75	5.70	5.75	5.70
Methyl. . . . . lb.	5.75	6.00	6.00	5.75	6.00	5.75
Iso Borneol. . . . . lb.	2.25	2.35	2.35	2.15	2.25	2.15
Iso Bornyl Acetate. . . . . lb.	3.00	3.20	3.20	2.80	3.00	2.80
Iso-Butyl Benzoate, 5 lb bot. lb.	2.75	3.00	3.00	2.75	3.00	2.75
Iso-Safrol, 1 lb bot imp. . . . lb.	1.75	1.85	1.85	1.65	1.75	1.65
Domestic, 5 lb bot. . . . . lb.	3.50	3.75	3.75	3.50	3.75	3.50
Lynalyl Acetate, 1 lb bot. . . . lb.	3.50	4.50	4.50	3.25	4.25	3.25
Benzoate, 1 lb bot. . . . . lb.	13.00	14.00	14.00	13.00	14.00	13.00
Formate, 5 lb bot. . . . . lb.	10.50	12.00	12.00	10.50	12.00	10.50
METHYL ACETOPHENONE . . . . . lb.	3.35	3.50	3.50	3.35	3.50	3.35
Anthranilate, 1 lb bot. . . . . lb.	2.45	2.50	2.50	2.40	2.45	2.40
Imported. . . . . lb.	2.70	2.75	2.75	2.70	2.75	2.70
Anthranilic Acid. . . . . lb.	11.75	12.00	12.00	11.75	12.00	11.75
Benzoate, 5 lb bot imp. . . . lb.	1.75	1.85	1.85	1.75	1.85	1.75
Domestic, 5 lb bot. . . . . lb.	1.75	2.00	2.00	1.75	2.00	1.75
Cinnamate, 1 lb bot. . . . . lb.	3.75	4.25	4.25	3.75	4.25	3.75
Heptenone, 1 lb bot. . . . . lb	6.50	7.00	9.00	6.50	9.00	8.50
Paracresol, 1 lb bot. . . . . lb	4.50	8.00	8.00	4.50	8.00	4.50
Phenylacetate, 5 lb bot. . . lb	3.75	4.00	4.00	3.75	4.00	3.75
Salicylate, USP, 500 lb dr . lb.	...	.40	.40	.40	.40	.40
50 lb cases. . . . . lb.	...	.42	.42	.42	.42	.42
Mirbane rect. 1,000 lb drs. . . lb.	.12	.13	.13	.12	.13	.12
Musk Ambrette 1 lb cans. . . lb	7.25	7.50	7.50	6.50	6.75	6.50
Ketone 1 lb cans. . . . . lb	8.00	8.15	8.15	8.00	8.15	8.00
Xylene 5 lb cans. . . . . lb.	2.25	2.35	2.35	2.25	2.35	2.25
Nerolin 1 lb cans. . . . . lb.	1.35	1.40	1.40	1.35	1.40	1.35
Octyl Alcohol 1 lb bot. . . . . lb.	30.00	32.00	32.00	30.00	32.00	30.00
Oenanthic Ether lb bot. . . . . lb.	1.90	2.00	2.00	1.90	2.00	1.90
Paracresol Methyl Ether. . . . lb.	6.50	6.75	6.75	6.50	6.75	6.50
Paracresyl Acetate. . . . . lb.	5.50	5.75	5.75	5.50	5.75	5.50
Para Cymene Refd 110 gal dr . . . . . gal.	2.25	2.50	2.50	2.25	2.50	2.25
PHENYLACETALDEHYDE 50% 1 lb bot. . . . . lb.	4.75	5.00	5.00	4.75	5.00	4.75
Imported 50%. . . . . lb.	4.75	5.00	5.00	4.75	5.00	4.75
100%. . . . . lb.	8.00	8.25	8.25	8.00	8.25	8.00
Phenylacetic Acid 1 lb bot. . lb.	3.50	3.75	3.75	3.00	3.25	3.00
Phenyl Diacetate 1 oz bot. . . oz.	3.00	3.25	3.25	3.00	3.25	3.00
1 lb bot. . . . . lb.	8.00	10.00	10.00	8.00	10.00	8.00
Imported. . . . . lb.	7.00	7.75	7.75	7.00	7.75	7.00
Phenylethyl Alcohol 1 lb bot. lb.	4.50	4.75	4.75	4.50	4.75	4.50
Phenyl Ethyl Acetate. . . . . lb.	8.25	8.75	8.75	8.25	8.75	8.25
Butyrate 1 lb bot. . . . . lb.	15.00	16.00	16.00	15.00	16.00	15.00
Formate, 1 lb bot. . . . . lb.	19.00	21.00	21.00	19.00	21.00	19.00
Propionate, 1 lb bot. . . . . lb.	16.00	18.00	18.00	16.00	18.00	16.00
Valerate, 1 lb bot. . . . . lb.	19.00	20.00	20.00	19.00	20.00	19.00
Phenylpropylalcohol, 1 lb bot . . . . . lb.	12.00	12.50	12.50	12.00	12.50	12.00
Skatol, 1 oz bot. . . . . lb.	4.50	7.00	7.00	4.50	7.00	4.50
Terpinyl Acetate, 25 lb cans. . lb.	.90	.95	.95	.75	.80	.75
Imported, 25 lb cans.	.85	.90	.90	.85	.90	.85
TERPINEOL, CP, 1000 lb drs . . . . . lb.	.27	.29	.29	.27	.35	.27
50 lb cans. . . . . lb.	.31	.33	.33	.31	.39	.31
Absolute, 25 lb cans. . . . . lb.	.48	.50	.50	.48	.50	.48
Imported, 25 lb cans. . . lb.	.58	.60	.60	.58	.60	.58
Valerianic Ether see Ethyl Valerate						
Vanillin (Clove Oil), USP. lb.	5.50	5.75	6.80	5.75	7.00	6.00
(Guaiacol) USP. . . . . lb.	5.00	5.25	6.55	5.00	7.15	7.15

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PRODUCTS
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{ Monthly Review }

Imports of Fixatives Up

Imports into the United States of the subject products during the past two years showed considerable gains in the case of ambergris and castoreum and minor decreases in the instance of civet and musk. Imports of ambergris were the largest for any period during the past seven years with the exception of 1927, whereas imports of civet were the lowest during this period.

The following table shows the imports of these products into the United States during the past few years:

	Ambergris		*Castoreum*		*Civet*		*Musk in Grains or Pods*	
	Lbs.	*Value*	*Ozs*	*Value*	*Ozs.*	*Value*	*Lbs.*	*Value*
1923.....	38	$4,794	8,902	$1,206	21,878	$44,230	719	$151,000
1925.....	223	80,400	1,362	,300	11,650	26,500	573	203,000
1927.....	491	95,400	4,620	2,500	11,220	22,000	734	256,000
1928.....	160	46,297	946	682	9,865	22,650	794	236,995
1929.....	387	125,908	2,334	2,128	7,457	20,021	749	191,001

Bois de Rose from Brazil

Exports for the first half of 1930 of the subject products from Brazil to the United States through the port of Para, which port accounts for a considerable share of the total, amounted to approximately 44,000 pounds of balsam, and 7,400 pounds of rosewood oil, a marked decrease over shipments made during the first half of 1929. (Consul Geo. E. Seltzer, Para.)

Peppermint has been reduced to $2.05 per lb. in the spot market. It is reported that a somewhat firmer attitude has been taken by the primary market due principally to the fact that some buying has taken place for investment purposes. This, however, has not been reflected in the spot market to any extent. Demand has been light.

Petit grain is firm with the full market price being paid by buyers and no indications of competition willing to make concessions. Stocks are ample, however, considering the rate at which the commodity is passing into consuming hands.

Spearmint has been considerably lower in the primary market and replacements have been made at attractive prices. This has been reflected in the spot market quotations being marked down to $2.75 and $2.85 per lb. Orders have been filled in small lots only.

Sassafras is in small demand at this writing but the market is holding up well under existing conditions. The price range is from $1.30 to $1.32 per lb. for U.S.P. with no indications that any shading in this commodity has taken place.

Wormseed is basically in a strong position as this commodity has apparently been underproduced. During the past month the price, however, was reduced to about $4.00 per lb. and this is attributed almost entirely to the lack of demand at this time. The primary market, it is reported, is not desirous to sell lower and under the circumstances an increase in consuming demand would undoubtedly show the way to higher, or at least a much firmer, level of prices.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Yara Yara, 1 lb cans.....lb.	1.50	1.60	1.50	1.60	1.60

Essential Oils

Almond Bitter, USP, 5 lb bot lb.	2.75	2.85	2.85	2.75	.285	2.70
Bitter, ffPA, 5 lb bot.....lb.	2.85	2.95	2.95	2.85	3.10	2.85
Sweet, 56 lb cans.....lb.	.50	.53	.68	.50	.85	.65
Amber crude, 25 lb tins.....lb.	.20	.22	.35	.20	.35	.33
Rectified, 25 lb tins.....lb.	.52	.55	.55	.52	.55	.52
Angelica Root, 1 lb bot.....lb.	25.00	35.00	33.00	21.00	24.00	21.00
Anise Tech, 400 lb drums...lb.	.76	.78	1.15	.76	1.15	.55
USP, 60 lb cans.....lb.	.78	.79	1.16	.78	1.16	.58
Apricot Kernel, 50 lb cans...lb.	.34	.35	.39	.34	.46	.37
Bay, 25 lb tins N. F. V., 50.55% Phenol.....lb.	2.20	2.40	2.60	2.20	3.00	2.30
Terpeneless.....lb.	5.80	6.00	6.00	5.80	6.00	5.80
BERGAMOT, 25 lb coppers.lb.	2.50	2.60	3.70	2.40	5.35	3.25
Terpeneless.....lb.	14.00	18.00	18.00	14.00	18.00	14.00
Artificial, 25 lb cans.....lb.	2.00	2.75	3.25	2.00	3.25	2.50
Birch, Sweet, Northern, 25 lb tins.....lb.	2.25	2.75	4.00	2.25	4.00	3.75
Southern, 25 lb tins.....lb.	...	1.95	1.95	1.95	1.95	1.95
Birch Tar, rect., 5 lb bot.....lb.	.50	.55	.55	.50	.55	.50
Crude, 50 lb tins.....lb.	.12	.13	.13	.12	.13	.12
Bois de Rose, tins..... Brazillian.....lb.	1.05	1.20	1.60	1.05	1.70	1.55
Cayenne, tins.....lb.	1.80	1.85	2.00	1.65	2.35	1.90
Cade, 25 lb cans.....lb.	.25	.27	.27	.25	.27	.25
Cajuput, native, 50 lb tins..lb.	.65	.70	.80	.65	.88	.70
Calamus, 5 lb bot.....lb.	2.75	3.00	3.50	2.75	3.50	3.40
Camphor Sassa, 1000 lb drs..lb.	.22	.23	.30	.22	.36	.14½
White, 400 lb drs.....lb.	.20	.22	.40	.20	.40	.10½
Cans, 50 lbs.....lb.	.24	.25	.35	.24	.35	.14
CANANGA, Native 25 lb tins .....lb.	2.30	2.45	3.15	2.30	3.25	2.90
Rectified, 25 lb tins.....lb.	2.70	2.80	3.40	2.70	3.50	3.30
Caraway, USP.....lb.	1.65	1.80	1.95	1.65	2.00	1.65
Cardamon, NF, 1 lb bot.....lb.	24.00	37.00	39.00	24.00	29.00	25.00
Cascarilla, USP, 1 lb bot.....lb.	65.00	80.00	90.00	65.00	90.00	50.00
Cassia, ...	...	...	...	...	...	...
Redist, USP, 50 lb cans...lb.	1.20	1.25	1.45	1.20	2.10	1.40
Cedar Leaf, 50 lb tins.....lb.	1.05	1.10	1.10	1.05	1.10	.95
Cedar Wood, light, 1000 lb drs .....lb.	.40	.42	.45	.25	.28	.25
Celery, 1 lb bot.....lb.	...	7.50	7.75	7.50	7.75	7.75
Chaulmoogra, USP 80 lb cases lb.	...	1.50	1.50	1.50	1.50	1.20
Cinnamon Ceylon, 1 lb bot...lb.	9.50	13.00	13.00	9.50	13.00	9.50
Leaf, 5 lb bot.....lb.	1.85	1.95	1.95	1.85	1.95	1.60
CITRONELLA Ceylon, 1000 lb drs.....lb.	.50	.52	.63	.50	.61	.44
50 lb tins.....lb.	.53	.55	.64	.53	.62	.46
Java, 400 lb drs.....lb.	.59	.64	.82	.59	.91	.49
50 lb tins.....lb.	.61	.65	.84	.61	.93	.52
Cloves, USP, 50 lb cans.....lb.	1.80	1.85	2.20	1.75	2.90	2.20
6 lb bot.....lb.	2.20	2.25	2.25	.84	2.70	1.75
Copaiba.....lb.	...	.50	.65	.50	.80	.65
Coriander, USP, 10 lb bots..lb.	5.25	5.75	5.90	5.25	11.25	5.90
Croton USP, 25 lb tins.....lb.	6.50	6.75	6.75	3.00	3.15	.90
Cubebs, USP, 5 lb bot.....lb.	2.90	3.00	3.00	2.90	3.00	2.90
Cumin, 1 lb bot.....lb.	7.00	7.50	7.50	7.00	3.75	3.75
Dill, 25 lb cans.....lb.	3.75	5.25	5.75	3.75	3.85	3.75
Erigeron, 20 lb tins.....lb.	1.40	1.50	2.00	1.40	1.90	1.80
EUCALYPTUS Austl, USP, 56 lb cans, cases.....lb.	.40	.41	.52	.40	.60	.51
500 lb drs.....lb.	.37	.38	.51	.37	.59	.50
Fennel, USP, 25 lb tins.....lb.	.95	1.10	1.10	.80	.85	.80
Geranium African, 25 lb tins..lb.	4.15	4.25	5.40	4.15	5.40	3.85
Bourbon, 28 lb tins.....lb.	4.25	4.50	4.90	4.00	5.85	4.25
Turkish, 28 lb tins.....lb.	3.10	3.25	3.35	3.10	3.35	3.00
Ginger, 1 lb bot.....lb.	5.35	5.60	6.85	5.35	6.85	6.00
Gingergrass, 28 lb tins.....lb.	2.50	2.70	2.70	2.50	2.70	2.50
Hemlock, 25 lb tins.....lb.	1.05	1.10	1.10	1.05	1.10	1.05
Iuniper Berries, USP, 25 lb tins .....lb.	1.80	1.85	2.15	1.80	2.15	2.05
Wood, 50 lb tins.....lb.	.50	.60	.60	.50	.60	.50
LAVENDER, USP, 28 lb tins .....lb	2.30	2.45	3.40	2.30	3.40	3.25
Spike Spanish, 50 lb cans..lb.	.80	.90	1.10	.80	.95	.90
Lemon Ital, 25 lb cans.....lb.	1.15	1.40	3.40	1.15	5.75	2.75
California 35 lb cbys....lb.	.90	1.10	2.25	.90	4.65	2.05
Lemongrass, native, 50 lb cans .....lb.	.72	.74	.74	.72	.83	.81
Limes, expressed, 25 lb tins..lb.	16.25	19.25	22.50	16.25	28.00	19.50
Distilled, 25 lb tins.....lb.	8.25	8.75	9.00	7.25	9.75	7.75
Linaloe Mex., 70 lb cases....lb.	...	2.10	2.25	2.10	2.25	2.20
Mace, distilled, 50 lb tins....lb	1.40	1.45	1.80	1.40	1.80	1.75
Mandarin, 25 lb cases.....lb.	5.50	6.00	9.25	5.50	11.50	8.75
Mirbane, ref Aromatic Chemicals.....						
MUSTARD, USP, 1 lb bots.lb.	9.50	10.00	10.00	9.50	10.00	9.50
Artif, USP, 5 lb bot.....lb.	1.60	1.70	1.70	1.60	1.70	1.60
Neroli Bigarade, ¼ & ½ & 1 lb bot .....lb.	125.00	250.00	325.00	125.00	325.00	75.00
Petale, 1 lb bot.....lb.	160.00	170.00	170.00	150.00	170.00	160.00
Artificial, 1 lb bot.....lb.	5.00	15.00	15.00	5.00	15.00	5.00
Nutmeg, USP, 50 lb tins....lb	1.40	1.45	1.80	1.35	1.80	1.75
ORANGE BITTER, 25 lb tins .....lb	2.60	2.85	3.75	2.60	6.75	3.50
Sweet W Ind, 25 lb tins..lb	2.30	2.55	3.35	2.30	6.50	3.10
Italian, 25 lb cop.....lb	5.20	2.80	4.00	2.50	7.35	3.35

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Essential Oils

Monthly Review

Java Citronella Exports

Exports during the month of September 1930 amounted to 65 metric tons.

The figures are now:

	1926	1927	1928	1929	1930
January	104	107	104	67½	57
February	100	135	98	72	62
March	118	100	81	107	63
April	105	90	114	82½	79
May	73	90	184	121	62
June	95	132	109	43	48
July	110	94	78	80	68
August	81	88	77	77	82
September	95	141	58	66	65
Total January–September	881	977	903	716	586
October	108	96	91	55	
November	93	122	77	41	
December	100	117	69	55	
Total January–December	1,182	1,312	1,140	867	

Citronella trade is off although prices are holding up well at prevailing levels. Import costs have been such that buyers in the spot market have not been anxious to commit themselves for anything other than hand-to mouth requirements.

Caraway has been subject to shading, being offered below the prevailing schedule of prices. Buying of this oil has been in a very small way with dealers evincing a desire to sell and to make a sacrifice if necessary to induce business.

Cassia was one of the many items to feel the depressing lack of demand. Spot price has been marked down 5c per lb. to $1.20 with the report that some shading of these figures have been noticed. From $1.15 to even less could be done in some quarters on firm business.

Croton oil still continues extremely scarce. There are stocks available in a small way at $6.50 to $6.75 per lb. The fact that little demand existed has held the commodity without change during the past month. It is reported from abroad that this oil is being used as a denaturing material for alcohol and certainly very little of it is being shipped here.

Lemon oil is lower in both price and demand. New crop material is being offered at lower figures to offset the lack of demand and also a lack of interest in the commodity. Italian lemon is offered in the spot market at $1.15 per lb.

Demand for lavender has been light during the past month. Although no official revisions in scheduled prices took place the undertone has been weakened by an increase in competition which is reported as keen. The primary market has also shown a tendency toward the easy side.

Distilled lime oil is offered at from $8.25 to $8.75 per lb. with the market in a firm position regardless of the lack of active demand. It is reported that from 65 per cent. to 75 per cent. of the trees had been damaged by storm and the stocks available both here and in the primary market are in strong hands.

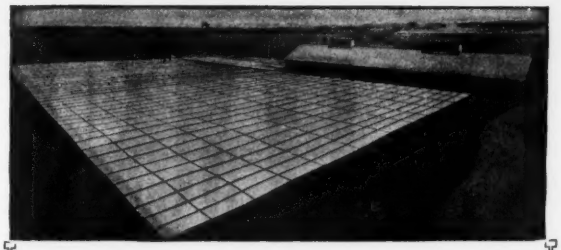
	Current Market	1930 High	1930 Low	1929 High	1929 Low
Orange American, Cold pressed 25 lb tins lb.	2.65	2.80	3.75	2.65	7.40	3.50
Distilled, 25 lb tins lb.	1.10	1.15	2.15	1.10	5.25	2.05
Spanish, 25 lb tins lb.	2.85	2.95	4.00	2.85	7.15	3.85
Oil Orris, concrete oz.	6.00	6.25	6.25	6.00	6.25	2.50
Origanum, 50 lb cans tech. lb.	.25	.27	.30	.25	.30	.28
Parsley, 1 lb bot lb.	9.00	9.25	9.25	9.00	9.25	8.00
Patchouli, 5 lb bot lb.	6.40	6.65	8.50	6.40	8.75	6.75
Pennyroyal, dom, 25 lb tins lb.	1.90	2.10	2.10	1.55	2.10	1.55
Imported, 25 lb tins lb.	...	1.15	1.20	1.10	1.20	1.20
Pepper Black lb.	10.00	...	10.25	10.00	...	...
Peppermint, nat. 60 lb cases lb.	2.05	2.35	3.45	2.05	4.05	2.85
Redis, USP, 60 lb cs. lb.	2.30	2.55	3.65	2.30	4.30	3.10
Petit Grain S A., 25 lb tins. lb.	1.50	1.60	2.05	1.50	2.05	1.90
French, 1 lb bot lb.	6.25	6.50	6.50	6.25	6.50	6.35
Italian, 25 lb tins lb.	2.20	2.30	2.30	2.20	2.30	2.20
Pimento, 25 lb tins lb.	2.10	2.25	2.75	2.10	2.75	2.25
Pineedle Siberian, cans lb.	.70	.75	.75	.70	.75	.60
Pinus, Sylvestris, 25 lb tins. lb.	1.90	2.00	2.00	1.90	2.00	1.90
Pumilio, USP, 25 lb tins lb.	2.25	2.35	2.95	2.35	2.95	2.85
Rose Fr, 8, 16, & 32 oz pkgs. lb.	14.00	17.00	17.00	14.00	17.00	12.00
Bulg, 8, 10 & 32 oz pkgs lb.	14.00	16.00	16.00	14.00	14.50	11.50
Rosemary, USP, 27½ lb tins lb.	...	.51	.56	.51	.56	.47½
1000 lb drums lb.	...	.50	.50	.50	.50	.42½
Tech, 25½ lb tins lb.	...	.40	.40	.40	.40	.40
Rue, 1 lb bot lb.	3.00	3.10	3.25	3.00	3.25	3.15
SANDALWOOD, E Ind ,USP, 100 lb case lb.	8.25	8.50	9.85	8.25	9.85	7.45
W Indian (Amayris), 25 lb tins lb.	2.85	2.95	2.95	2.85	2.95	2.25
Australian, Tins	5.65	5.65	5.65			
Sassafr s, USP, 50 lb cans lb.	1.30	1.32	1.32	1.30	1.32	.78
Artificial, 1000 lb drs, 60 lb cans lb.	.30	.32	.36	.30	.40	.26
Safrol, cans lb.	.36	.38	.43	.36	.48	.28
Savin, 50 lb tins lb.	2.50	2.75	2.75	2.30	2.75	1.65
SPEARMINT, USP, 50 lb tins lb	2.75	2.85	4.70	2.75	4.70	4.05
Spruce, 50 lb tins lb	.95	1.00	1.10	.95	1.10	1.05
Tansy, American, 25 lb tins. lb.	3.45	3.70	4.00	3.45	4.00	3.75
Tar, 50 gal bbls lb.	.25	.30	.30	.25	.30	.25
USP, 50 gal bbls lb.	.75	1.50	1.50	.75	1.50	.75
Thyme, red, NF, 25 lb tins. lb.	.75	.77	.80	.75	.90	.78
White, NF, 25 lb tins lb.	.83	.85	.85	.83	.90	.83
Tech, 110 lb drums lb.	.60	.70	.70	.60	.70	.60
Turpentine, USP, rect cbys. lb.	.27	.30	.30	.27	.30	.27
Vetivert Bourbon, 10 bot lb.	6.25	6.50	6.50	6.25	6.50	6.25
Indian, 1 lb bot lb.	25.00	38.00	38.00	25.00	38.00	25.00
Java, 1 lb bot lb.	15.00	16.00	16.00	15.00	16.00	15.00
Wine, heavy, 1 lb bot lb.	1.65	1.75	1.75	1.65	1.75	1.65
WINTERGREEN Gaultheria, true, 25 lb tin lb.	8.00	10.00	10.00	8.00	10.00	8.00
Southern, 25 lb tins lb.	3.75	4.00	4.00	3.75	4.00	3.75
Synthetic see Methyl salicylate						
Wormwood, dom, 25 lb tins. lb.	7.00	7.25	17.25	7.00	35.00	13.25
Wormseed, Balt, 25 lb tins. lb.	4.10	4.60	4.75	2.80	3.65	1.80
Ylang Ylang Bourbon, 10 lb tins No. 1 lb.	6.00	6.25	9.25	6.00	9.75	9.25
10 lb tins No. 2 lb.	5.20	5.25	8.50	5.20	8.50	8.25
Manila, 1 lb bot lb.	30.00	36.00	40.00	30.00	40.00	30.00

Oleoresins

Aspidum, USP, bot and tins. lb.	...	1.25	1.25	1.25	1.45	1.25
Capsicum, USP, bot and tins lb	3.50	4.25	4.25	3.50	4.25	3.50
Cubeb, USP, bot and tins lb.	3.00	3.25	2.25	3.00	3.25	3.00
Ginger bot and tins lb.	2.85	3.35	3.35	2.85	3.35	2.85
Malefern see Aspidum						
Orris, bot & tins lb.	15.00	18.00	18.00	15.00	18.00	15.00
Pepper, black, USP, bot & tin lb.	...	9.50	9.50	9.50	9.50	9.50
Vanilla, bot & tins lb.	8.00	8.75	8.75	8.00	8.75	8.00

Perfumer's Sundries

Almond Meal, 25 lb cans lb.	.20	.21	.21	.20	.21	.20
Amber liquid, 400 lb drs lb.	2.20	2.30	2.30	2.20	2.30	2.20
Ambergris, Black, boxes oz.	14.00	15.00	15.00	14.00	15.00	14.00
Gray boxes oz.	32.00	36.00	36.00	32.00	36.00	32.00
BALSAM COPAIBA Para, 80 lb cases lb.	...	.25	.33½	.25	.34	.30
South American, USP, 80 lb cases lb.	...	.26	.37	.26	.37	.37
Peru, 120 lb cases lb.	1.65	2.00	2.00	1.65	2.05	1.75
Tolu, 90 lb cases lb.	1.05	1.10	1.30	1.05	1.30	1.15
Benzoin Gum, Siam, boxes lb.	1.20	1.30	1.30	1.20	1.30	1.20
Castoreum, 1 lb bot lb.	20.00	22.00	22.00	9.50	10.00	9.50
Chalk, Precip, 1 gt 175 bbls. lb.	.04½	.05	.05	.04½	.05	.04½
Cherry Laurel Water, 24 ltr cby lb.	4.10	4.60	4.60	4.10	4.60	4.10
Civet, Abyssin, horns oz.	2.10	3.00	3.00	2.10	3.00	2.10
Labdanum, 5 lb bot lb.	5.50	6.00	6.00	5.50	6.00	5.50
Musk Pods Cabardine, tins lb.	...	...	...	...	...	...
Musk Tonquin, tins, Pods oz.	24.00	26.00	26.00	24.00	26.00	24.00
Grains Cabardine, tins oz.	...	...	...	...	...	...
Tonquin, tins, Grained oz.	28.00	34.00	34.00	28.00	34.00	28.00
Synthetic See Aromatic Chemical						
Rice Starch, 140 lb bags lb.	.09	.10	.10	.09	.10	.09
Rose Water, 24 ltr cbys. cby.	5.00	5.50	5.50	5.00	5.50	5.00
Sandalwood, pwd bags lb.	.22½	.40	.40	.22½	.40	.22½
Saponin, 5 lb tins lb.	1.15	1.30	1.30	1.15	1.30	1.15
Talc, Italian, 220 lb bags ton.	60.00	80.00	80.00	60.00	80.00	60.00
French, 220 lb bags ton.	40.00	45.00	45.00	40.00	45.00	40.00



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{ Monthly Review }

Gum Arabic Weak

The spot market on Sudan Gum Arabic or Acacia is decidedly weak with price again declining. Stocks are now freely offered at 12½c and 13½c per lb. This is attributed principally to the large falling off in demand in the principle consuming markets of the world coupled with the fact that stocks in the primary market are large. These stocks will be augmented shortly as gathering of the gum begins in December so that it is likely that still lower prices will prevail in the near future.

"During the past few weeks information of a more reliable character has come into the possession of those interested in the position of the Sudan gum acacia market," states "Chemist and Druggist", London. "In the early months of this year many reports arrived from the Sudan which were very conflicting, with the result that violent fluctuations in values were reported almost daily between January and March. At one period, early in January, up to 92s. 6d. per cwt., c. i. f., was paid for Kordofan cleaned sorts, against 49s., c. i. f., a fortnight earlier; thus, within the space of two weeks acacia rose 43s. 6d. per cwt. This clearly illustrates the "wild" aspect of the market during this period, and, unfortunately, many purchases were made at between 75s. and 92s. 6d. per cwt.; as the market to-day stands at 49s. per cwt., c. i. f., these purchasers must be very disappointed, especially as this dear gum is now passing into consumption. We have consistently maintained that the market was in a false position, and deliberately "rigged" by certain operators in the Sudan, who hoped that by the spreading of false reports as to the crop, buyers in all parts of the world would be eager to cover requirements at almost any price on account of the crop failure of the previous year. To prove our contention that the estimates given by these operators were inaccurate, we give below some interesting figures showing the exports of acacia from the Sudan during the months of January to August this year in comparison with those of 1929:

Destination	1929 Total	1930 Total	Difference in 1930 +	Difference in 1930 —
Great Britain	2,681	3,121	440	—
U. S. A.	3,551	2,870	—	681
France	2,211	2,631	420	—
Germany	2,913	2,560	—	353
Italy	893	1,075	182	—
Belgium	818	968	150	—
Japan	386	438	52	—
Spain	189	242	53	—
Holland	377	399	22	—
Denmark	15	11	—	4
Norway and Sweden	100	306	206	—
Egypt	50	88	38	—
Australia and New Zealand	383	441	58	—
China	144	201	57	—
Canada	20	41	21	—
Argentine	46	23	—	23
Brazil	25	35	10	—
Uraguay	7	5	—	2
Finland	27	19	—	8
British India	84	13	—	71
Other countries in America	23	31	8	—
Other countries	37	62	25	—
Total tons	14,980	15,580	1,742	1,142 +600

"Thus it will be observed that on balance there is actually an increase of 600 tons exported over the period under review, as against the corresponding period last year. Furthermore, it may be of interest to note the

Drugs and Spices

	Current Market	1930 High	1930 Low	1929 High	1929 Low
Aconite Root, USP, bags....lb.	.17	.18	.19	.15	.21	.18
Agar Agar, No. 1, bales....lb.	1.26	1.27				
Agar Agar No. 2, bales....lb.	1.18	1.20	1.45	1.40	1.45	1.40
Almonds Meal....lb.	.19	.20	.20	.19	.30	.15
Aletris Root, bags....lb.	.31	.32	.37	.30	.38	.35
Alkanet Root, bags....lb.	.11	.12	.14	.11	.15	.11
ALOES, Cape, 400 lb cases. lb.	.12	.13	.21	.12	.18	.14
Curacao, 100 lb cases....lb.	.25	.27	.27	.25	.27	.19
Socotrine, Whole, 300 lb cs lb.	.35	.40	.50	.35	.50	.35
Althea Root, bags....lb.	.20	.22	.22	.20	.22	.20
Cut cases....lb.	.25	.32	.37	.25	.40	.30
Angelica Root, bags....lb.	.18	.19	.22	.18	.28	.21
Angostura Bark, bags....lb	.20	.23	.25	.20	.26	.19
Anise Star case....lb	.12	.12½	.12½	.09½	.19	.11
Spanish, bags....lb	.10	.10½	.14½	.10	.19	.13½
ARABIC GUM, White, No. 1, 220 lb bags....lb.	.40	.42	.45	.35	.38	.22
Seconds, 220 lb bags....lb.	.38	.40	.43	.33	.36	.16
Sorts, Amber, 220 lb bags..lb.	.12½	.13	.27	.12½	.32	.11
Powd, USP, 300 lb bbls....lb.	.18	.21	.32	.18	.35	.17½
Areca Nuts, 100 lb bbls....lb.	.08	.10	.20	.08	.14	.10
Powd, 100 lb bbls....lb.	.14	.16	.27	.14	.27	.14
Arnica Flowers, bales....lb.	.16	.18	.35	.16	1.00	.34
Root, bags....lb.	.42	.43	.46	.42	.46	.35
Arrowroot, St. Vincent, powd bbls....lb.	.08	.09	.10½	.08	.10½	.10
Asafoetida, 250 lb cases....lb.	.23	.24	.27	.21	.29	.23
Powd, 50 lb boxes....lb.	.36	.37	.50	.36	.54	.46
Balm Gilead Buds, bags....lb.	.33	.38	.40	.33	.40	.35
Balmony Herbs, bales....lb.	.23	.25	.25	.23	.25	.18
Barberry Bark, of root, bags lb.	.19	.21	.21	.18	.20	.18
Bayberry Bark, bales....lb.	.10	.11	.12	.10	.13	.10
Wax bbls....lb.	.29	.32	.32	.29	.32	.29
BELLADONNA LEAVES, bale ....lb.	.14	.16	.20	.13½	.20	.17
Root, bags....lb.	.12½	.13½	.19	.12½	.21	.18
Bees Wax, White, cases....lb.	.48	.52	.60	.48	.60	.55
Yellow refined cases....lb.	.34	.40	.42	.34	.42	.41
Berberis Aquafolium Root, bags ....lb.	.09	.10	.10	.09	.12	.09
Beth Root, bags....lb.	.13	.14	.17	.13	.18	.16
Black Indian Hemp Root, 100 lb bags....lb.	.15	.16	.19	.15	.19	.18
Blood Root, bags....lb.	.14	.14½	.18½	.14	.18½	.17½
Blueflag Root, bags....lb.	.16	.19	.21	.15	.21	.18
Boldo Leaves, bales....lb.	.15	.17	.17	.15	.17	.15
Boneset Herb, bales....lb.	.10	.11	.12	.10	.12	.10
Borage Flowers, bales....lb.	.15	.16	.16	.15	.15	.14½
Broomtop Herb Cut, bales..lb.	.08	.09	.11	.08	.11	.10
Bryonia Root, bags....lb.	.10	.11	.12	.10	.12	.11
BUCHU LEAVES Short, 250 lb. bales....lb.	.25	.27	.40	.24	.47	.36
Long bales....lb.	.75	.80	.80	.75	.80	.75
Buckbean Leaves, bales....lb.	.08	.09	.09	.08	.10	.08
Buckthorn Bark, bags....lb.	.05½	.06	.07½	.05	.05½	.05
Berries, bags....lb.	.30	.35	.45	.30	.50	.40
Burdock Root, bags....lb.	.11	.12	.18	.10	.18	.13
Seed bags....lb.	.40	...	.40	.40	.65	.40
Burgundy Pitch, 110 stand gross for net....lb.	.08	.09	.09	.08	.09	.08
Imported....lb.	.11	.12	.12	.11	.13	.11
Calabar Beans, bags....lb.	.20	.21	.26	.20	.26	.22
Calamus Root, blchd cases..lb.	.37	.42	.50	.37	.52	.45
Unbleached, bags....lb.	.07	.08½	.08½	.06½	.08	.06½
Calendula Petals, imp bales..lb.	.45	.50	1.05	.45	1.70	.95
Calisaya Bark, bales....lb.	.20	.21	.21	.19	.22	.19
Powdered, bbls....lb.	.25	.26	.26	.24	.27	.24
Canary Seed, South America, bags....lb.	.07½	.08	.08	.05½	.07½	.05
Dutch, bags....lb.	.06½	.06½	.06½	.05½	.06½	.05½
Candelilla Wax, bags....lb.	.27	.28	.28	.27	.28	.27
Cannella Alba Bark, bales...lb.	.26	.27	.31	.26	.31	.28
Cannabis, U.S.P....lb	.25	.32	.32	.23	.33	.22
Cantharides, Chinese, cases..lb.	.40	.45	.47	.35	.55	.42
Powdered, boxes....lb.	.65	.68	.68	.58	.80	.63
Russian, cases....lb.	.60	.65	.65	.48	.55	.50
Powdered, boxes....lb.	.70	.72	.72	.58	.75	.65
Caraway Seed, African, bags ....lb.	.05	.06	.06	.05	.06	.05
Dutch, 11 lb bags....lb.	.10	.10½	.10½	.10	.12	.09½
Cardamon bleached, cases...lb.	1.40	1.50	1.55	1.25	1.75	1.45
Decorticated, cases....lb.	.96	1.00	1.40	.96	1.60	1.35
Cascara Amarga, 150 lb bbls lb.	Nom	...	...	...	...	...
So called bales....lb.	.50	.75	.85	.50	.85	.60
CASCARA SAGRADA, 1928 bark....lb.	.17	.18	.18	.16	.18	.15
1929 bark....lb.	.16½	.18	.18	.15	.16	.14
1930 bark....lb.	.14	.15	.16	.14	.15	.13
Cascarilla Bark, quills, bales..lb.	.80	.90	1.00	.80	1.00	.90
Siftings, bbls....lb.	.65	...	.65	.65	.65	.65
Cassia Batavia No. 1 bbls....lb.	.08½	.08½	.14	.08½	.15	.13½
Shortstick, bales....lb.	.07½	.07½	.11	.07½	.12½	.10½
Batavia No. 3, bales....lb.	.06½	.07	.09¾	.06½	.11	.09¾
China Select Rolls, cases..lb.	.03¾	.04	.07¼	.03¾	.09	.08¼
Broken, bales....lb.	.05¼	.05¾	.10	.05½	.10	.09¾
Saigon, thin....lb.	.22	.23	.31	.22	.39	.28
Buds, cases....lb.	.12	.13	.26	.12	.28½	.16½
Fistula, baskets....lb.	.08	.09	.12	.08	.13	.10
Catnip, Herb, bales....lb.	.20	.21	.21	.18	.23	.18
Celery Seed, bales....lb.	.18	.19	.19	.16½	.19	.16
Ceresin Wax, White, bags...lb.	.15	.20	.20	.15	.20	.15
Yellow 200 lb. bags....lb.	.11	.14	.14	.11	.14	.11
Imp. 100 lb. bags....lb.	.25	.38	.38	.25	.38	.25¼

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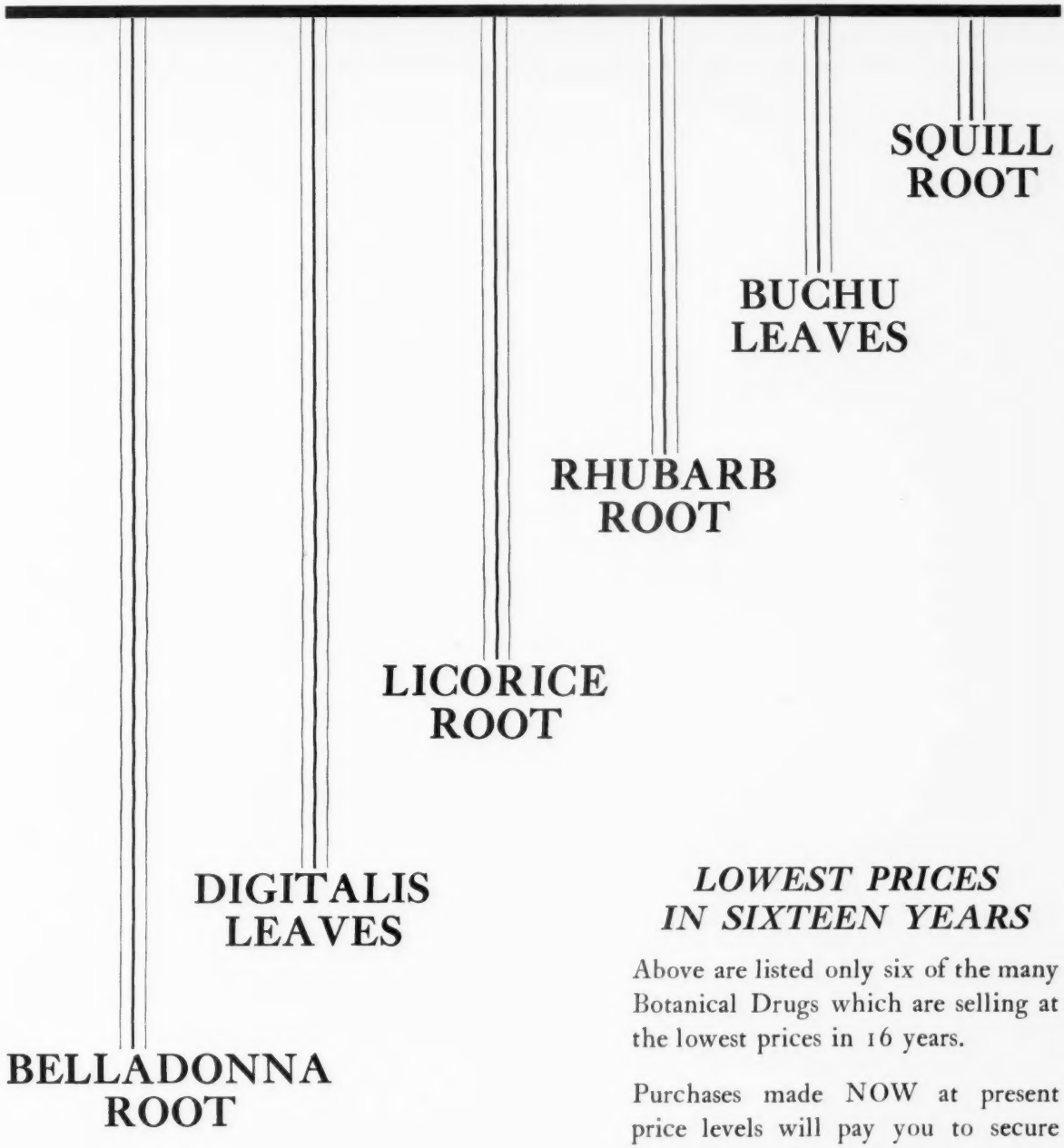

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Monthly Review

arrivals in the Sudan markets up to the end of August, compared with previous seasons, viz.:—

	1924	1925	1926	1927	1928	1929	1930
Tons.	14,572	12,154	15,692	13,381	16,338	10,968	13,883

"Briefly, the actual increase of production against that of last season amounts to 2,915 tons, which, after taking into consideration the increase in exports of 600 tons, shows on balance that the stocks in the Sudan amount to approximately 2,315 tons. In the figures given by us in our issue of July 19 (p. 79), we stated that a conservative estimate was between 1,500 tons and 1,750 tons, whilst the stocks resulting from a further six weeks' production, viz., to the end of August, would fully make up the above total of 2,315 tons. There seems to be no reason to doubt that during the months when production was great, large quantities of gum were stored by the natives in the hope of selling it towards the end of the season at very high prices. At present the market position is somewhat obscure, and no definite lead can be given until some reliable information is forthcoming in regard to the new crop."

Spanish Saffron Rises Sharply

Spanish saffron is extremely firm and price has advanced to $10.75 and $11 per lb. This represents an increase of over $2.00 per lb. during the past month. The primary market is very much higher and it is reported that prices for shipment of new crop are equal to the above quotations. There is some old crop available for shipment at figures below above mentioned but the new crop stocks are high.

Several factors have contributed to the strength in this commodity. The new crop is reported as short and of an inferior quality. Spanish exchange continues to advance and so place this market at a disadvantage. It is also reported that 2,500 pounds of saffron has been taken out of the Spanish market for European consumption as requirements there have increased sharply.

Existing conditions have therefore combined to create this situation and if the crop reports prove to be as unsatisfactory as would appear saffron should enjoy high prices for some time.

Ergot is holding up well under existing conditions with the undertone of the market reported as firm. Although the market at present is inactive, seller's look to a better future for this commodity. Spanish goods have been strong and it is hoped that this will create a better condition generally.

Barberry bark of root is hither at 19c and 20c per lb. It is reported that cheap priced material has been removed from the market with the resulting increase as noted. Tree bark remains unchanged.

Digitalis has again felt the lack of demand for this commodity and prices have responded accordingly. This commodity has been marked down to 12c and 13c per lb. The undertone still remains uneasy.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
CHAMOMILE FLOWERS					
Roman, bales lb.	.50	.55	.80	.45	.80	.40
Hungarian, cases lb.	.20	.21	.22	.16	.26	.20
Charcoal Willow, powd, bbls lb.	.06	.06½	.06½	.06	.06½	.06
Wood, powd, bbls lb.	.04	.05	.05	.04	.05	.04
Chestnut Bark lb.	.07	.08	.08	.07	.08	.07
Leaves bales lb.	.05	.05½	.05½	.05	.05½	.05
Chicle Gum, lb bbls lb.	.58	.75	.75	.58	.75	.58
Chiretta, bales lb.	.14	.17	.28	.14	.30	.26
Cinnamon, Ceylon, No. 1, bales lb.	.18	.19	.19	.18	.62	.34
No. 2 bales lb.	.16	.16½	.34	.16	.51	.32
No. 3 bales lb.	.15	.16	.16	.15	.56	.55½
Clover Tops, Red, bags lb.	.09	.10	.11	.08½	.14	.10
Cloves Zanzibar, 135 lb bbl lb.	.29	.30	.30	.22	.38	.23½
Cochineal, Black lb.	.69	...	.69	.69	.69	.69
Silver lb.	.85	...	.85	.85	.85	.85
Cohosh Root, Black, bags lb.	.07	.08	.09	.07	.09	.07½
Blue, bags lb.	.08	.09	.11	.08	.12	.10
Colchicum Root, bags lb.	.08	.09	.11	.08	.11	.07
Seed, bags lb.	.75	.80	1.00	.75	1.00	.65
COLOMBO ROOT, bags lb.	.07	.08	.12	.07	.20	.11
Colocynth Pulp, bales lb.	.20	.21	.27	.20	.45	.29
Coltsfoot Leaves, bags lb.	.08	.09	.09	.08	.09	.08
Comfrey Root, bags lb.	.14	.15	.15	.11	.14	.11
Condurango Bark, bags lb.	.13	.14	.16	.13	.17	.15
Coriander Seed, Morocco, bags lb.	.02½	.03	.03½	.02½	.06	.03
Bleached, bags lb.	.06½	.07	.08	.06½	.11½	.07½
Corn Silk, bales lb.	.06½	.07½	.07½	.05½	.06½	.05½
Cotton Root Bark, bales lb.	.11	.12	.14	.10	.15	.12
Cowhage, 1 oz tins lb.	1.00	...	1.00	1.00	1.00	1.00
Cramp Bark so called bales lb.	.06½	.07	.07	.06½	.08	.06
True, bags lb.	.32	.37	.40	.30	.48	.35
Cranesbill Root, bags lb.	.10	...	.10	.10	.10	.10
CUBEB BERRIES, XX bags lb.	.39	.41	.53	.39	.53	.48
Powdered, boxes lb	.42	.43	.55	.42	.55	.50
Culvers Root, bags lb.	.16	.17	.19	.16	.20	.18
Cumin Seed, Malta, bags lb.	.13¼	.13¾	.13¾	.13¼	.13¾	.12
Morocco, bags lb.	.12⅝	.13	.16	.12⅝	.16	.12
Cuttlefish, Bone Trieste, Straps lb.	.22	.24	.25	.22	.25	.14
French, boxes lb.	.22	.23	.23	.22	.23	.12½
Powdered, bbls lb.	.09	.10	.10	.09	.10	.09
Broken, bales lb.	.07	...	.07	.07	.07	.05
Damiana Leaves, bales lb.	.15	.16	.18	.15	.18	.16
Dandelion Root, Imp. bags lb.	.20	.22	.27	.20	.29	.19
Deer Tongue Leaves, bales lb.	.11	.13	.13	.11	.13	.11
Digitalis Leaves, bales lb.	.12	.13	.28	.12	.70	.26
Dogwood Bark, Jamaica bags lb.	.08½	.09½	.10	.08	.11	.09
American bales lb.	.06½	...	.06½	.06½	.06½	.06½
Doggrass Root, USP, cut bags lb.	.13	.14	.14	.12	.13	.10
Dragons Blood Mass, cases lb.	.65	.70	.70	.65	.70	.65
Reeds, boxes lb.	...	1.20	4.00	1.20	4.00	.90
Echinacea Root, bags lb.	.22	.24	.25	.22	.28	.23
Elcampane Root, bags lb.	.07	.08	.09	.07	.09	.08
Elder Flowers, bags lb.	.27	.32	.55	.25	.55	.22
Elemi Gum, 85 lb cases lb.	.26	.28	.28	.26	.28	.26
Elm Bark, bundles lb.	.25	.26	.40	.25	.40	.25
Grinding bags lb.	.13½	.14	.14	.13½	.14	.13½
Powdered, bbls lb.	.18	.19	.22	.18	.22	.19
Ephedra Vulgaris, bales lb.	.07	.08	.10	.07	.16	.09
ERGOT, 150-200 lb bags lb.	.47	.65	.65	.47	.95	.60
Eucalyptus Leaves, bales lb.	.05½	.06½	.09	.05½	.11	.07
Euphorbia Pilulifera, Herb, bags lb	.06	.09	.07½	.05½	.11	.06½
Euphorbium Gum, cases lb.	.14	.20	.20	.14	.20	.14
Fennel Seed, French, bags lb.	.10	.10½	.14½	.10	.18½	.14
German bags lb.	.12	.14	.19	.12	.27	.17
Foenugreek Seed, 200 lb bags lb.	.04¼	.04¾	.06½	.04¼	.06½	.05
Fish Berries, 100-125 lb bag lb.	.06	.07½	.07½	.06	.07½	.06
Flax Seed, Whole 182 lb bbls.	14.50	15.25	17.00	14.50	17.00	14.00
Ground, 180 lb bbls lb.	.08	.08½	.09½	.08	.09½	.08
Flea Seeds Black bags lb.	.28	.33	.80	.28	.35	.20
Fringe Tree Bark or Root bags lb.	.18	.20	.26	.17	.24	.19
Fumigating Pastiles, boxes lb.	.30	.35	.35	.30	.35	.30
Galangal Root, bags lb.	.08¼	.09½	.15	.08	.15	.14
Galbanum Gum, cans lb.	.95	1.05	1.05	.95	1.25	.95
Gamboge Gum, 100 lb cases lb.	.90	.95	1.15	.95	1.25	1.10
Powdered, cases lb.	...	1.10	1.25	1.05	1.40	1.20
Gelsemium Root, bags lb.	.07½	.08½	.10	.07½	.12	.09
GENTIAN ROOT, bags lb.	.08	.09	.10	.08	.11	.09
Ground bbls, boxes lb.	.13	.14	.14	.13	.14	.13
Powdered, bbls, boxes lb.	.13	.14	.14	.13	.14	.13
Ginger, African, bags lb.	.10	.10½	.17½	.08½	.17½	.13
Jamaica Grinding bags lb.	.14	.15	.21½	.11	.20	.18
Cochin ABC & Lemon, bags lb.	.12	.12½	.18½	.12	.18½	.17
Ginseng Root, cultivated cs lb.	8.00	10.00	10.00	8.00	10.00	8.00
Wild Southern, cases lb.	...	16.00	16.00	16.00	16.00	16.00
Golden Seal Root, bags lb.	1.60	1.80	2.80	1.60	3.80	2.70
Powdered, boxes lb.	2.15	2.25	3.15	2.15	4.35	3.25
Herb, barrels lb.	1.25	1.30	1.30	1.25	1.30	1.25
Grains of Paradise, bags lb.	.18	.23	.40	.18	.85	.30
Grindelia Robusta, Herb, bale lb.	.08	.09	.11	.08	.12	.09
Guaiac Gum, 150 lb cases lb.	.35	.36	.36	.30	.38	.33
Strained 75 lb cases lb.	.70	.75	.75	.70	.75	.70
Guarana, tin cases lb.	1.50	1.75	3.00	1.50	3.00	2.50
Hellebore Root, Black, bbls lb.	.05½	.06	.06	.05½	.06	.05½
White, 250 lb bbls lb.	.07½	.08½	.08½	.07½	.08½	.07½
Powdered lb.	.11	.12	.12	.11	.12	.11
Helonias Root, bags lb.	.55	.57	.65	.50	.72	.62
Hemp Seed, bags lb.	.03½	.03½	.06	.03½	.06	.05
Henbane Leaves, USP, bales lb.	.11½	.12½	.17	.11½	.20	.15

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Drugs and Spices

{ *Monthly Review* }

Plenty of Ma Huang

According to Dr. B. E. Read, Professor of Pharmacology at the Peiping Union Medical College, reports that supplies of ma huang (ephedra vulgaris) growing in China are being depleted are erroneous. Dr. Read states that all the stocks he has seen recently have been cut rather than pulled, and he, therefore, does not believe that there is any danger of depletion of supply. In his opinion, the growing interest in this drug, rather than diminution of the supply, is responsible for the upward tendency of the price. He further states that about three years ago foreign buyers of ma huang appeared in the spring, when the plants were young, and demanded a supply. This led to a cutting and pulling of young plants, which was a serious menace to the industry, but it is believed that the buyers now understand their previous unwise course, since the young plants contain very little of the drug, and accordingly there were many complaints from the United States when the first shipments of spring material were received.

Cantharides are very much firmer to 40c per lb. for the Chinese and 60c per lb. for the Russian. A shortage of spot goods is reported but some factors seem to think that this shortage will prove to be only temporary. Other factors are of the opinion that the shortage exists at the source of supply and that the condition will continue. The Russian variety is confined to a few hands and should an improved demand develop would probably go to still higher levels.

Raspberries are in short supply, stocks having decreased very sharply. The spot market has been advanced to 65c and 70c per lb. This represents a sharp increment in value, namely 25c per lb. during the past month. Dealers have shown a tendency to hold on to stocks rather than to sell at figures below the current quotations. A crop shortage is reported as rather acute with replacement prices higher.

In the Seychell Islands there are under cultivation approximately 4,000 acres of basic material for essential oils. The cultivation of Basil, Patchouli, Palmarosa, Peppermint, Ginger, Clove, Citronella, and Lemon Grass has been taken up by the planters. Exports during 1929 amounted to 66,311 liters of Cinnamon Leaf and 4,324 liters of Patchouli. (Consul Karl de G. MacVitty, Nairobi Kenya, East Africa.)

Fennel is one of the items that particularly felt the very keen competition of the past month. Prices have been revised to 10c and 10½c per lb. for the French, and 12c to 12½c per lb. for German seed. Buying has been in a moderate way.

Aletris has been reduced to 31c and 32c per lb. due principally to lower replacement cost. This reduction in cost to dealers has been passed on to the consuming market.

		Current Market		1930 High	1930 Low	1929 High	1929 Low
HENNA LEAVES, bales	lb.	.10	.11	.13	.10	.13	.12½
Powdered	lb.	.14	.15	.16	.14	.17	.15
Hops, bales	lb.	...	.23	.25	.20	.32	.23
Horehound, Herb, bales	lb.	.07½	.08½	.09	.07½	.09	.08
Hydrangea Root, bales	lb.	...	.07½	.09	.07½	.09	.08
Insect Flowers	lb.	.27	.28	.28	.27	.37	.18
Powdered, Pure, 200 lb bb	lb.	.25	.26	.35	.25	.46	.25
IPECAC ROOT, Carteagna, bags	lb.	2.50	2.75	4.25	2.25	4.25	2.70
Powdered, 220 lb bbls	lb.	3.00	3.10	4.45	2.65	4.45	3.20
Rio Whole, bags	lb.	2.90	3.00	4.00	2.90	4.00	2.85
Powdered, 110 lb bbls	lb.	3.40	3.45	3.50	3.25	3.50	3.40
Isinglass, American, 130 lb cases	lb.	.95	1.00	1.00	.95	1.00	.95
Russian (Beluga), boxes	lb.	4.50	...	4.50	4.50	4.50	4.50
Jaborandi Leaves, bales	lb.	.11	.11½	.22½	.11	.22½	.11½
Jalap Root, Whole, 150 lb bag	lb.	.21	.23	.43	.21	.45	.24
USP, Powd, 250 lb bbls	lb.	.26	.29	.48	.26	.50	.29
Japan Wax 24 lb cases	lb.	.18½	.19	.19	.18½	.19	.18½
JUNIPER BERRIES, 125 lb bags	lb.	.05½	.06	.07	.05	.09	.05
Kamala, boxes	lb.	.90	.95	1.45	.90	1.40	.82
Karaya Gum, Powdered, bbls	lb.	.12	.20	.20	.12	.20	.12
Kava Kava Root, bags	lb.	.14	.15	.15	.14	.15	.14
Kino Gum, Black, cases	lb.	.50	.55	.55	.50	.55	.50
Kola Nuts, 150 lb bags	lb.	.08½	.09½	.15	.08½	.15	.13
Lady Slipper Root, bags	lb.	.60	.65	1.15	.60	1.30	.85
Larkspur Seed, bags	lb.	.40	.45	.57	.38	.57	.40
Laurel Berries, bags	lb.	.08	.09	.09	.08	.09	.08
Leaves, Greek, bags	lb.	.05½	.06½	.06½	.04	.06	.05
Italian, bales	lb.	.08	.09	.09	.03½	.04	.03½
Lavender Flowers, Ordinary	lb.	.28	.30	.35	.28	.35	.32
Selected	lb.	.35	.36	.46	.35	.46	.43
Lemon Peel, bags	lb.	.09	.10	.10½	.09	.13	.10
LICORICE ROOT, Whole bbls	lb.	.12½	.18½	.18½	.12	.18	.12
Spanish Natural bales	lb.	.05½	.07	.07	.05½	.07	.05½
Powdered, bbls	lb.	.09	.10	.10	.09	.10	.09
Selected 2 & 5 lb bdls	lb.	.13	.15	.15	.13	.15	.12½
Cutting, 125 lb bags	ln.	.06	.06½	.07	.06	.07	.06½
Turkish, 150 lb bales	lb.	.05	...	.05	.05	.05	.05
Linden Flowers with leaves, bales	lb.	.18	.19	.24	.17½	.27	.23
Without leaves, bales	lb.	.23	.24	.29	.22	.32	.28
Liverwort Leaves, bales	lb.	.15	.16	.19	.15	.20	.18
Lobelia, Herb, bales	lb.	.10	.11	.13	.10	.16	.12
Seed, bags	lb.	.45	.50	.50	.45	.65	.45
Lovage Root, Imp., bags	lb.	.25	.27	.37	.25	.37	.25
Lupulin N. F., tins	lb.	1.45	1.50	1.65	1.45	1.75	1.65
Lycopodium, 88 lb. cases	lb.	.48	.50	.68	.48	.85	.66
MACE SIAUW, No. 1, cases	lb.	.50	.51	.82	.50	.86	.80
Banda No. 1, cases	lb.	.59	.60	.86	.59	.98	.85
Batavia No. 2, cases	lb.	.35	.36	.50	.35	.58	.47
Malva Flowers, Blue, bales	lb.	.40	.42	.57	.35	.57	.40
Black, bales	lb.	.40	.55	.55	.40	.60	.40
Leaves, bales	lb.	.14	.15	.15	.12	.15	.14
Manaca Root, bales	lb.	...	.25	.25	.24	.24	.22
Manna, Large Flake, cases	lb.	.70	.72	1.02	.70	.92	.75
Small Flake, cakes	lb.	.40	.48	.83	.40	.65	.52
Sorts, cases	lb.	.45	.50	.50	.45	.50	.45
Mandrake Root, bags	lb.	.10	.11	.13	.10	.14	.12
Marjoram, Herb	lb.	.18	.18½	.19	.15	.19	.16
French, No. 1 bales	lb.	.20	.21	.26	.20	.25	.22
German, bales	lb.	.65	.70	.70	.65	.70	.65
Mastic Gum, 120 lb cans	lb.	.18	.29	.31	.18	.32	.30
Matico Leaves, bales	lb.	.20	.21	.25	.15	.25	.20
Mezereon Bark, bags	lb.	.03½	.03¾	.04½	.03½	.04½	.03¾
Millet Seed, Yellow, bags	lb.	.06½	.07	.07	.06½	.07	.06½
Montan Wax, Crude, bags	lb.	.25	.28	.28	.25	.28	.25
Bleached, bags	lb.	.10	.12	.12	.10	.11	.10
Moss, Iceland, bales	lb.	.13	.16	.17	.13	.18	.13
Irish, Bleached, bales	lb.	.85	.87	1.40	.85	2.00	1.35
Mullein Flowers, tins	lb.	.07½	.08	.08	.07½	.08	.07½
Leaves, bales	lb.	.07½	.08½	.10	.07½	.12	.09
Musk Root, Russian, bags	lb.	.20	.22	.35	.18	.65	.32
Myrrh Gum, 200 lb, cases	lb.	.22	...	.22	.22	.22	.22
Nutgalls, Chinese, bags	lb.	.21	...	.21	.21	.21	.21
Aleppy, bags	lb.	.23	...	.23	.23	.23	.23
Powdered, bags	lb.	.17	.18	.27	.17	.31½	.26
Nutmegs, 110's cases	lb.	.20	.21	.37	.20	.42	.36
75's & 80's cases	lb	.19	.20	.25	.19	.25	.24
Grinding, bags	lb.	.05	.06	.06	.05	.06	.05
NUX-VOMICA Buttons, bag	lb.	.08½	.09	.09	.08½	.09	.08
Powdered, 200 lb bbls	lb.	.05	.05½	.05½	.05	.05½	.05
Oak Bark, bags	lb.	.11½	.13	.14	.11½	.15	.12½
Olibanum Gum, 280 lb cases	lb.	.25	.26	.30	.25	.29	.27
Siftings	lb.	.17	.19	.20	.17	.23	.18
Tears, No. 1 Extra	lb.	.14	.16	.16	.14	.18	.14
No. 2	lb.	12.00	13.00	13.00	12.00	13.00	12.00
No. 3	lb.	13.00	14.00	14.00	13.00	14.00	13.00
Opium Gum, USP, cases	lb.	13.00	14.00	14.00	13.00	14.00	13.00
Granular, cans	lb.	.30	.35	.40	.25	.39	.25
Powdered, USP, cans	lb.	.09	.10	.12	.09	.12½	.10
Orange Flowers, cases	lb.	.09	.10	.15	.08	.16	.11
Peel, Bitter, bags	lb.	.25	.26	.30	.27	.32	.17
Sweet bags	lb.	.28	.30	.34	.28	.35	.21
ORRIS ROOT, Flor. bid. bags	lb.	.14	.15	.24	.14	.25	.16
Powdered, 200 lb bbls	lb.	.19	.20	.27	.19	.32	.20
Verona, bags	lb.	.95	1.00	1.20	.95	1.20	.90
Powdered, 200 lb bbls	lb.	...	...	...	...	...	...
Fingers, boxes	lb.	.24	.25	.25	.24	.25	.24
Ozokerite Wax, Brown, Hard	lb.	.30	.31	.31	.30	.31	.30
Bags	lb.	.37	...	.37	.37	.37	.37
Green, Hard, bags	lb.						
Yellow, Refined, bags	lb.						

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Psyllium Seed More Plentiful

Psyllium seed is reported as coming into the spot market in rather larger quantities with the result that, although movement into consuming fields has been very heavy, the price was again revised. Black seed is offered at from 28c to 33c as to quality and quantity and there is a possibility that slightly better figures could be obtained. Twenty-five cents per lb. was reported as being done.

Italian Psyllium Seed

Italian psyllium seed grows in considerable quantities in the Bologna district, is not cultivated, and is found where alfalfa is grown. A list of firms located in Bologna, Italy, which are probably in a position to quote prices on psyllium seed is available upon application says Acting Commercial Attache A. A. Osborne, Rome.

French Psyllium Seed

As previously reported, the plantings of psyllium seed in France for the present year were unusually large principally because of the good prices which prevailed last year. Owing to rainy weather, the 1930 harvest took place later than usual and was only nearing completion the third week in September.

Heavy storms in the producing areas were, fortunately, too late to do any serious damage to the crop. However, that part of the crop which had not been harvested at the time of the storms suffered some damage—damage which will affect the quality of that part of the crop rather than the quantity of the harvest as a whole. The present crop is considered as very good, and estimates from reliable sources place this year's French production at between 1,400 and 1,500 metric tons. (Assistant Trade Commissioner Earle C. Taylor, Paris.

Spain's Psyllium Seed

Psyllium seed is used in Spain for various purposes, says Consul Austin C. Brady, Malaga. The seed is sold in drug stores in packages for ointments, poultices, and other medicinal uses. Manufacturers of toilet articles employ it to some extent as a base for perfumes, and in the preparation of brilliantine for the hair.

The average f. o. b. value per pound of the seed shipped from Malaga to the United States in 1928 was $0.23; in 1929, $0.20; in 1930, to August, $0.27.

During August two shipments were made to the United States amounting to 8,930 pounds, valued at $2,196, or an average value of $0.245 per pound.

Wormwood is unchanged from existing levels reported last month. The primary market is offering replacement stocks on a basis commensurate with the supplies on hand and the active consuming demands at the present.

There is a steady export trade in patchouli leaves from Penang, Straits Settlements, and during the year 1929, there were exported to the United States 740,832 pounds, valued at $87,799. (Consul S. C. Ebling, Penang.)

		Current Market		1930 High	1930 Low	1929 High	1929 Low
Papain, Crude, 150 lb cases	lb.	2.75	2.80	3.15	2.75	3.50	2.95
Pure, Powdered, 10 lb bot.	lb.	2.80	2.85	3.30	2.80	3.55	3.10
Paprika, bags	lb.	.21	.21½	.24	.21	.33	.23½
Paraffin Wax, fully refined, slabs							
125 @ 127 A.M.P. bags	lb.	...	.03⅜	...	...	...	...
130 @ 132 A.M.P. bags	lb.	...	.04	...	...	...	...
135 @ 137 A.M.P. bags	lb.	...	.05	...	...	...	...
Pareira Brava Root, bags	lb.	.14	.15	.15	.13	.14	.11
Passion Flower, bales	lb.	.05½	.06½	.10	.05½	.25	.09
Patchouli Leaves, bales	lb.	.20	.21	.23	.20	.23	.22
Pennyroyal, Herb, 100 lb bags	lb.	.07	...	.07	.07	.07	.07
Leaves, 100 lb bags	lb.	.12	.14	.16	.12	.16	.14
PEPPERMINT LEAVES, Imp bales	lb.	.65	.75	.75	.65	.75	.43
Domestic, bales	lb.	.28	.29	.46	.28	.46	.24
Pichi Leaves, bags	lb.	.12	.13	.14	.12	.16	.13
Pimento Select, bags	lb.	.12	.12½	.19½	.12	.30½	.19½
Pink Root, True, bags	lb.	.48	.50	.57	.48	.60	.55
Pleurisy Root, bags	lb.	.20	.21	.23	.18	.28	.21
Poke Berries, bags	lb.	...	.18	.18	.18	.30	.18
Root, 200 lb bales	lb.	.07	.07½	.08½	.07	.08½	.07½
Pomegrant Bark of Root, bags	lb.	.30	.35	.35	.30	.35	.20
Bark of Fruit, bags	lb.	.25	.30	.30	.25	.30	.25
Bark of Tree, bags	lb.	.18	.22	.22	.18	.22	.15
POPPY FLOWERS, Red, bags	lb.	.45	.50	.60	.45	.60	.50
Heads, bags	lb.	.50	...	.50	.50	.50	.50
Prickly Ash Bark	lb.	.14	.17	.17	.14	.17	.14
Southern bags	lb.	.13	.13½	.14	.13	.14	.13½
Northern, bags	lb.	.15	.16	.16	.15	.18	.15
Berries, bags	lb.	.14	.15	.24	.14	.21	.19
Prince's Pine, bales	lb.	.18	.23	.50	.18	.50	.15
Pulsatilla, Herb, bags	lb.	.11	.12	.12	.11	.14	.12
Pumpkin Seed, bags	lb.	.14	.15	.15	.14	.15	.14
Quassia Chips, bags	lb.	.06½	...	.06½	.06½	.06½	.06½
Quebracho, bulk, 125 lb. bbl.	lb.	.30	.31	.31	.30	.31	.29
Root, bags	lb.	...	.07	.07	.07	.07	.07
Quince Seed, bags	lb.	1.10	1.20	1.20	.80	.80	.70
Persian, bags	lb.	1.45	1.50	1.50	.95	1.25	.80
Rape Seed, South American, bags	lb.	.05½	.06	.06	.05½	.06	.05½
Dutch, bags	lb.	.06	.06½	.07½	.06	.07½	.06
Japanese, small bags	lb.	.04	.04½	.06½	.04	.07	.05½
Raspberries, Dried, bbls.	lb.	.65	.70	.70	.40	.60	.45
Red Saunders, bags	lb.	.08	...	.08	.08	.08	.08
Rhatany Root, bags	lb.	.11	.12	.13	.11	.13	.11
Rhubarb Root, HD, cases	lb.	.20	.21	.28	.19	.41	.27
Powdered, bbls.	lb.	.25	.27	.85	.24	.46	.33
Rosemary Leaves, bales	lb.	.05	.05½	.05½	.05	.06	.04½
Flowers, cases, bales	lb.	.25	.30	.30	.25	.30	.25
Rose Petals, pale	lb.	.22	.23½	.41½	.21	.42½	.40
Red	lb.	1.00	1.05	1.70	.95	1.80	1.65
Rue, Herb, bales	lb.	.18	.20	.20	.18	.20	.18
Sabadilla Seed, bags	lb.	.29	.30	.31	.28	.34	.28
Powdered, bbls	lb.	.29	.30	.33	.27	.39	.30
SAFFRON FLOWERS, American, bales	lb.	.27	.28	.35	.27	.40	.30
Valencia, 1 lb cans	lb.	10.75	11.00	11.50	8.00	12.00	10.50
Sage Dalmatian, bales	lb.	.05½	.06	.06	.05½	.06	.05½
Greek, bales	lb.	.05½	.06	.06	.05½	.06	.05½
Sandarac Gum, 300 lb bbls.	lb.	.45	.50	.75	.45	.75	.40
Sarsaparilla Root, Honduras, bales	lb.	.46	.47	.54	.46	.55	.53
Mexican, bales	lb.	.18	.20	.20	.16½	.40	.24
Sassafras Bark, Ordinary, bales	lb.	.12	.14	.16	.12	.16	.14
Select, bales	lb.	.19	.21	.24	.19	.28	.22
Savory Leaves, bale	lb.	.07½	.08	.09	.07½	.09	.08½
Saw Palmetto Berries, bags	lb.	.08	.09	.10½	.08	.12	.09½
Scammony Resin, boxes	lb.	1.30	1.35	1.35	1.30	1.35	1.30
Root, bags	lb.	.08½	...	.08½	.08½	.08½	.08½
Senega Root, bags	lb.	.80	.85	1.05	.55	1.35	1.00
SENNA ALEX., 150 lb cases	lb.	.25	.30	.30	.25	.30	.25
Half leaf 150 lb cases	lb.	.12½	.14½	.14½	.12½	.15	.12½
Sifting, 400 lb bales	lb.	.11	.11½	.11½	.11	.11½	.10½
Tinnevelly, Bold, 350 lb bales	lb.	.16	.18	.18	.16	.18	.16
Medium Leaf	lb.	.11	.12	.12	.11	.12	.10
Small Leaf	lb.	.07	.09	.09	.07	.10	.07
Pods, 350 lb	lb.	.08	.08½	.08½	.08	.11½	.08
Powdered, 200 lb	lb.	...	.10	.11	.10	.11	.11
Serpentaria Root, bags	lb.	.52	.55	.68	.48	.72	.65
Shellac, T. N., bags	lb.	.57	.58	.58	.57	.58	.57
Simaruba Bark, bales	lb.	.25	.27	.28	.20	.40	.20
Skullcap Leaves, Eastern, bales	lb.	...	.75	.75	.75	.75	.40
Western, bales	lb.	.30	.31	.35	.25	.35	.18
Skunk Cabbage, Striped, bales	lb.	.12	.14	.16	.11	.16	.14
Snake Root, Canada Natural, bags	lb.	.26	.27	.28	.26	.28	.24
Canada, Stripped, bags	lb.	.55	...	.55	.55	.55	.55
Soap Bark	lb.	.14	.15	.15	.14	.15	.14
Cut, 125-175 lb bags	lb.	.09	.09½	.11½	.09	.16	.11
Crushed, 200 lb bbls.	lb.	.16	...	.16	.16	.16	.16
Powdered, bbls.	lb.	.15	...	.17	.15	.17	.17
Spearmint Leaves, American, bales	lb.	.35	.36	.37	.32	.37	.25
Spermaceti, blocks, cakes, cases	lb.	.32	.35	.35	.32	.35	.32
Spikenard Root, bags	lb.	.13	.13½	.20	.13	.20	.18½
Squaw Vine, bales	lb.	.14	.15	.21	.14	.21	.18
Squills, White	lb.	.07½	.08½	.10	.07½	.13	.09
Powdered, bulk	lb.	.23	.25	.25	.23	.25	.20
Stavesacre Seed, bags	lb.	.14	.15	.17	.14	.18	.16
Stillingia Root, bags	lb.	.08	.09	.10	.08	.12	.09
Stone Root, bags	lb.	.08	.09	.09	.08	.09	.08
St. Ignatius Beans, bags	lb.	...	Nom.	.15	.14½	.15	.14

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White Squill in Sicily

Sicilian white squill is in limited demand says Vice-Consul Walton C. Ferris, Palermo. While the existence of a genuine red squill in the Palermo region of Sicily is reported, dealers assert that what is called red squill is actually only a second and discolored quality of white squill. Authorities in Palermo on Sicilian products deny this, however, saying that there are two distinct varieties, of which only the white has heretofore been gathered and used. Therefore, it is believed that it is this discoloration which has led some dealers to suppose that they are dealing in red squill, which acquires its color from the nature of the soil in which it grows. Prime squill is quoted in Palermo at 140 Italian lire $7.33 per quintal, and second quality at 100 to 110 lire from $5.25 to $5.76. The supply is almost unlimited, but the demand limits the actual harvest to between 100 and 150 tons. It is believed that this is entirely white squill. The principal growing regions are Sutera, Campofranco, and Naro, all in the Province of Agrigento; Villafrati and Bsoco Godrano in the Province of Palermo; and Palagonia, in the Province of Catania. All squill grows wild, usually on otherwise useless public lands, and the right to gather it is farmed out by municipalities concerned, for a small consideration. White squill and red are said to grow in the same regions.

Ylang Ylang from Philippine

According to the annual report of the Insular Collector of Customs, exports of ylang-ylang oil (Manila) from the Philippine Islands during 1928 and 1929 amounted to 620 kilos, valued at $32,700, and 560 kilos, valued at $28,200, respectively.

The United States is the principal purchaser, being the destination of approximately 55 per cent. of the exports for 1928, and 70 per cent. for 1929. France purchased the bulk of the remainder.

French Camphor

The Vagoin plant of the Societe Alsacienne de Produits Chimiques started production of synthetic camphor at the beginning of 1929, and the company has since turned out a product which seems to have met with favor in the celluloid industry. It is stated that the daily production of the company is 2,000 kilos and that on several occasions a production of 2,500 kilos daily has been attained. (Assistant Trade Commissioner Earle C. Taylor, Paris.)

In 1928, the latest year for which statistics are available, approximately 250 gallons of bay oil and 10,300 gallons of bay rum were manufactured and exported from St. Lucia. (Vice Consul Herman C. Vogenitz, St. Lucia, Barbados.)

Bismuth metal and salts continue at a steady level of prices. Production of metal still continues above the demand which is reported as being routine. With general business conditions such as they are the prospects of expansion to buyers is still remote.

	Current Market	1930 High	1930 Low	1929 High	1929 Low
St. John's Bread, bags.....lb.	...	.09	.09	.09	.09
STRAMONIUM LEAVES, bales.....lb.	.14	.16	.18	.14	.20	.16
Seed, bags.....lb.	.07½	...	.07½	.07	.07½	.07½
Strophanthus Seed, Kombe, bags.....lb.	2.00	2.25	2.50	2.00	2.50	2.00
Styrax Liquid, Artificial.....lb.	.26	.35	.35	.26	.35	.26
Genuine, USP.....lb.	.38	.43	.45	.38	.45	.40
Sunflower Seed, bags Calif...lb.	.04½	.05	.07	.04½	.07	.06
South American, bags....lb.	.07	.07½	.07½	.07	.07½	.07
Tamarinds, bbls.....lb.	.07	.08	.16	.07	.10	.05
Kegs.....keg	3.85	...	3.85	3.85	3.75	3.85
Tansy, Herb, bales.....lb.	.14	.15	.16	.14	.16	.11
Thus Gum, 280 lb bbls.....lb.	.08	.17	.20	.08	.20	.11½
THYME, Spanish, bales....lb.	.08	.08½	.16	.08	.16	.08½
French, bales.....lb.	.08½	.09	.11½	.08½	.12½	.08
Tonga Root, bundles.....lb.	.25	.26	.42	.25	.42	.42
Bark, bundles.....lb.	.25	.26	.42	.25	.42	.42
Tonka Beans, Angostura Cases	1.75	1.85	1.85	1.75	2.00	1.75
Para cases.....lb.	.90	...	.90	.90	.90	.90
Surinam cases.....lb.	1.00	1.10	1.10	1.00	1.50	1.00
Tragacanth Gum, No 1, 100 lb. cases.....lb.	1.45	1.50	1.50	1.45	1.60	1.50
No. 2.....lb.	1.30	1.40	1.40	1.30	1.50	1.30
No. 3.....lb.	1.10	1.20	1.20	1.10	1.30	1.10
Powdered, 50 lb boxes....lb.	.85	.95	1.00	.85	1.10	.90
Turkish cases.....lb.	.50	.90	.90	.50	.90	.45
Turmeric Root Madras, bags.lb.	.08½	.08½	.08½	.08½	.09	.08½
Aleppy bags.....lb.	.07½	.07½	.09	.07½	.10	.08½
Powdered.....lb.	.13	.15	.15	.13	.15	.13
China bags.....lb.	.11	.12	.12	.11	.12	.11
Turpentine Venice True, 80 lb cases.....lb.	.32	.40	.40	.32	.40	.32
Artificial, 80 lb cases.....lb.	.17	.18	.18	.17	.18	.17
Uva Ursi Leaves, bales.....lb.	.06	.06½	.06½	.06	.06½	.06
Valerian Root, Belgium, bags .....lb	.13	.15	.21	.12	.30	.19
VANILLA BEANS, Mexican, whole, cases.....lb.	4.25	5.50	5.50	3.50	4.50	3.25
Cuts, cases.....lb.	3.25	3.40	3.40	2.75	3.30	2.50
Bourbon, cases.....lb.	1.25	1.65	2.50	1.25	2.65	1.75
South American, cases....lb.	3.00	3.25	3.25	2.85	3.00	2.50
Tahiti, Green, label cases..lb.	...	Nom.	2.00	1.75	2.50	1.75
Vetivert Root, 100 lb bags..lb.	.25	...	.25	.25	.25	.25
Violet Flowers, bags.....lb.	.90	.95	.95	.75	1.00	.68
Wahoo Bark of Root, bags..lb.	.45	.48	.53	.45	.56	.51
Bark of Tree, bags.....lb.	.23	.24	.26	.23	.31	.25
White Pine Bark, Roseed, bags .....lb.	.06	.08	.09½	.06	.15	.07
White Poplar Bark, bags....lb.	.06	.07½	.07½	.06	.07½	.05½
Wild Cherry Bark, Thin, Green .....lb.	.11	.12	.15	.11	.20	.14
Rossed bales.....lb.	.11	.12	.12	.11	.12	.11
Thick Rossed, bales....lb.	.08	...	.09	.08	.09	.09
Thin Natural, bales....lb.	.07½	.08½	.09	.07½	.09	.07½
Thick Natural, bales...lb.	.06	.06½	.06½	.06	.06½	.05
Wild Indigo Root, bags.....lb.	.13	.14	.15	.13	.15	.13
Willow Bark, bags.....lb.	.05	.05½	.05½	.05	.05½	.05
White, bags.....lb.	.15	...	.15	.15	.15	.15
Witch Hazel Bark, bags....lb.	.06	.07	.08	.06	.08	.05½
Leaves, bales.....lb.	.07	.08	.08	.07	.08	.06½
Wormseed, American, bags..lb.	...	.08	.11	.08	.13	.10
Levant, bags.....lb.	3.50	3.65	3.00	3.50	4.15	3.65
Wormwood, Herb, Imp., bales .....lb.	.08	.08½	.08½	.08	.10½	.08
Yellow Dock Root, bags....lb.	.08	.09	.14	.08	.14	.10
Yerba Mate, bags.....lb.	.18	.20	.20	.18	.20	.18
Santa, bags.....lb.	.09	.10½	.11	.09	.11½	.09½
Zedoary Root, bags.....lb.	.07	.08	.08	.07	.08	.06½
Miscellaneous						
Castor Oil, odorless, bbls.....lb.	...	.13½	.14½	.13½	...	...
Chalk drop, 175 lb. bbls.....lb.	...	.03½	.03½	.03½	.03½	.03½
Precip. light, 250 lb. cask..lb.	...	.04½	.04½	.04½	.04½	.04½
Heavy 540 lb. casks.....lb.	...	.02½	.02½	.02½	.03½	.02½
Bulk.....ton	...	5.00	5.00	5.00	5.00	5.00
English light, bags.....lb.	...	.04½	.08½	.08½	.08½	.08½
English light, casks.....lb.	.05½	...	...	...	...	...
Cocoa Butter, 12 lb. box....lb.	.42	.45	.45	.42	.45	.42
Cod Liver Oil Nor. 30 gal. bbls	27.00	28.00	31.00	27.00	36.00	22.00
Newfoundland.....bbl.	...	31.00	31.00	30.00	46.00	30.00
Collodion U. S. P. 30 lb. dr...lb.	...	.23	.23	.23	.23	.23
Corn Syrup 42° 50 gal. bbl. .....100 lb.	3.91	4.16	4.16	3.91	4.16	3.91
Gelatin, USP, Silver 100 lb. cases.....lb.	.55	.60	.60	.55	.60	.55
Pure Food, 50 lb. bbl.....lb.	.53	.55	.55	.53	.55	.55
Glucose, (grape sugar) dry 70° bags c-l NY.....100 lb.	3.14	3.24	3.24	3.14	3.24	3.14
Haarlem Oil, bot 6 gross cases .....gross	...	3.75	3.75	3.75	3.25	3.25
Imported, 5 gr. cs.....gross	...	3.50	3.50	3.50	3.50	3.50
Mineral Oil White, 50 gal. bbls. 80-85 vis.....gal.	.50	.55	.55	.50	.67	.50
85-90 vis.....gal.	.65	.70	.70	.65	.70	.65
125-130 vis.....gal.	.75	.85	.85	.75	.92	.65
290 vis.....gal.	.90	1.10	1.10	.90	1.10	.90
Russian 110-115 vis.....gal.	.69	.79	.80	.69	.80	.70
145-155 vis.....gal.	.72	.82	.84	.72	.89	.67
320-330 vis.....gal.	.80	.90	.92	.80	.97	.75
Olive Oil, Edible bbls.....gal.	2.00	2.40	2.40	2.00	...	...
Petrolatum, Lily White, USP. 400 lb. bbl.....lb.	.08	.09	.09	.08	.09	.08
Snow White USP, 400 lb. bbls.....lb.	.09½	.10	.10	.09½	.10	.09½
Soap Castile, bars 50 lb. box..lb.	...	.25				
Powd. USP 250 lb. bbls...lb.	...	.20				
Green, USP, 450 lb. bbls...lb.	.07½	.07½				
Neutral, powd. bbls.....lb.	.17	.18				

W M W — CHEMICALS

Ammonium Phosphate

Powdered -- Granular

Whenever you are in the market for Ammonium Phosphate no matter what grade we certainly would appreciate your inquiry.

A few other products - Phosphoric Acid - Tri Sodium Phosphate - Mono Sodium Phosphate - Potassium Phosphate.

WILCKES-MARTIN-WILCKES CO.

Chemical Works : Camden, N. J. Main Office : 135 William St., N. Y. C.

Sales Representatives: Boston—Chicago—Cleveland—Camden, N. J.—Detroit—San Francisco—New Orleans—St. Louis

"Standard of Quality Always"

PLYMOUTH

MEDICINAL WHITE OILS

Russian *Domestic*

COLD CREAM OILS

and

ALL RAW MATERIAL FOR TOILET CREAMS

STEARATES

ZINC ALUMINUM MAGNESIUM

Made Right *Priced Right*

M. W. PARSONS IMPORTS

AND

Plymouth Organic Laboratories

55 ANN STREET, NEW YORK

CRUDE DRUGS

FOREIGN & DOMESTIC

WHOLE & MILLED

FROM A POUND TO A CARLOAD

SDB Co.

Sales offices in all principal cities

Connections in all foreign countries

Collection depot at Asheville, N. C. for Domestic Botanicals

FACTORIES AT WEEHAWKEN & ASHEVILLE

The largest, most complete and fullest assorted stocks in America

S. B. PENICK & COMPANY

115-117 Fulton Street

New York, N. Y.

Ether Sulphuric U.S.P.

A Standard product of quality and dependability

Supplied in 1 lb., 5 lb. & 25 lb. cans or 300 lb. drums

The Symbol COOPER'S CERTIFIED CHEMICALS of Security

Charles Cooper & Co.

192 Worth Street

New York, N. Y.

Established 1857 Works: Newark, N. J.

GLYCERINE

All Grades

◆

COLGATE-PALMOLIVE-PEET CO.

Palmolive Bldg. Chicago, Ill.

Produced at and shipped from

NEW YORK LOUISVILLE

KANSAS CITY SAN FRANCISCO

FABRITIUS, OSLO

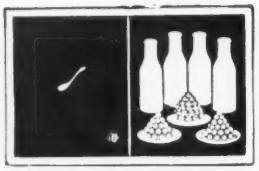
National Committee for Promoting the Consumption of Norwegian Cod Liver Oil, Bergen, Norway.

To combat wasting diseases; to accelerate the process of convalescence; to maintain health: Norwegian cod liver oil is a sure and trusted ally which no doctor can afford to disregard.

Thanks to its prolific content of vitamins A and D, Norwegian cod liver oil is a strong safeguard against the bacteria of colds, pneumonia, bronchitis, tuberculosis, diarrhoea, further against rickets, and a very troublesome eye disease called xeropthalmia. It also helps to maintain a healthy skin action.

There is no efficient substitute for cod liver oil.

A TEASPOONFUL OF NORWEGIAN COD LIVER OIL CONTAINS MORE VITAMINS THAN



ALL THE BUTTER AND MILK ANY INDIVIDUAL CAN EAT AND DRINK IN A DAY

NORWEGIAN COD LIVER OIL

Psyllium Seed

(*Continued from page 452*)

Eew's test[6] for Irish moss (carrageen) was also applied. However, a precipitate did not appear when as many as 5 cubic centimeters of the reagent (0.5 per cent. aqueous solution of methylene blue, U. S. P. X) were added drop by drop to 10 cubic centimeters of 0.4 per cent. solution of the crude gum. Likewise, no precipitate was formed when the methylene blue solution was added to 5 cubic centimeters of a 2 per cent. decoction of the ground seeds; the decoction was filtered through filter paper, and the test was applied to the filtrate while still hot, and also after cooling to room temperature.

Psyllium seed has been analyzed quantitatively and the qualitative reactions of its gum have been studied.

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(1) *New and Non-Official Remedies*, 1925, page 314.

(2) Solis-Cohen and Githens, *Pharmacotherapeutics*, 1928, page 996.

(3) Official and Tentative Methods of Analysis of the Association of Official Agricultural Chemists, Second Edition, 1925.

(4) Pearson and Hepburn, *Physiological and Clinical Chemistry*, 1925, pages 136-142.

(5) Fuller, *The Chemistry and Analysis of Drugs and Medicines*, 1920, pages 460-472.

(6) Ewe, *Journal of the American Pharmaceutical Association*, 1930, 19, 568-570.

John Clifford English Laboratories of Physics and Chemistry.

Hahneman Medical College and Hospital of Philadelphia.

China's Drug Market

(*Continued from page 454*)

2¼ per cent to 5 per cent according to the class of the article, on all orders, as well as a salary to defray his staff salaries. In return, he is responsible up to a certain amount (usually 25 per cent) that outstanding accounts are paid. The success of the business largely depends on the right Comprador being engaged, either through recommendation or by advertising. Any bona fide firm should have no difficulty in obtaining the services of a good Comprador prepared to put down the necessary security.

It is absolutely necessary to keep stocks in Shanghai, so as to be able to supply any immediate demand. There are many Chinese drug stores in every city, and several foreign ones in the principal Treaty Ports. All the larger stores should be supplied with a small consignment, open credit being given. This may seem a very costly, if not dangerous undertaking, in view of the immense area to be covered, but it is not necessary to cover a large area at the beginning, for

COD LIVER OIL

A-A BRAND

Finest Medicinal Quality

The recognized standard, known for its high vitamin contents. Guaranteed the finest Norwegian non-freezing medicinal cod liver oil.

POULTRY GRADES

For animal and poultry feeding
Highest vitamin potency
Packed in barrels or drums

Write us for quotations

For Spot Delivery or direct shipment from Norway

BRÖDR. AARSAETHER A/S
AALESUND, NORWAY

P. R. DREYER Inc.

Sole Representative in the United States

26 CLIFF STREET,
NEW YORK, N. Y.

CHICAGO PHILADELPHIA KANSAS CITY
BALTIMORE ST. LOUIS CINCINNATI
LOS ANGELES SAN FRANCISCO DETROIT

A FORMULA:

TO

YEARS OF PRACTICAL EXPERIENCE

ADD

A FRESH POINT OF VIEW

RESULT:

REDUCED OPERATING COSTS FOR YOU!

FRANCIS CHILSON

Consulting Production Engineer

101 West 31st Street New York

The Drug Market-Place

Wants and Offers

Business Opportunities

IMPORTERS of DRUGS and PHARMACEUTICAL PRODUCTS want offers. Take charge of Patents, Trade-marks, and Licenses to sell Pharmaceutical Specialties. Isaias G. Lopes & Co., Box 899, Bogota, Colombia, S. A.

EUROPEAN GLYCERINE FACTORY wants agent who is well introduced with the direct consumers of the cosmetic, pharmaceutical, color, paper, rubber, tire, textile, etc., industries, and who is regularly visiting these industries. Box 800, DRUG MARKETS.

This advertiser would like to hear from some manufacturer that requires sound financing. The requirements are: record of earnings, balance sheet, and a willingness to establish in one of several communities in consideration of the financing.

All communications held in strict confidence.
(Signed)
Industrial Relations & Economic Counsel
Box 815, DRUG MARKETS.

Situations Wanted

CHEMIST, 25, five years' experience manufacturing creams, lotions, perfumes; can originate and duplicate formulae and supply standard formulae for complete line toilet preparations. Willing to start for moderate salary with progressive company. Box 814, DRUG MARKETS.

PRODUCTION MAN; graduate chemical engineer, thoroughly familiar with modern methods of large scale production of cosmetics and toilet preparations, desires position as production manager in cosmetic or pharmaceutical establishment. Possesses practical knowledge of principal types of equipment. Experienced in managing large staff of operators. Box 813, DRUG MARKETS.

DOUBLE DISTILLED BAY RUM
at 60% Volume
BAY RUM "AGUA MILAGROSA DE PUERTO RICO" at 75% Volume.
OIL BAY at 60% phenol.
DOMINGO M. GILORMINI (Manufacturer)
Guayama, P. R.

Rates—All classifications $1.00 an issue for 20 words or less; additional words 5c each.

Payment must accompany order, add 10 cents if replies are to come to a box number and be forwarded.

DRUG MARKETS
101 West 31st. St. New York

Plant Equipment Reliable Used Machinery

HEADQUARTERS GOOD USED MACHINERY

SPECIALS

NEW Glass Lined Storage and Mixing Tanks, 10, 30, 50, and 100 gals. Direct from manufacturer. Send for circular.
40—Dopp Steam Jack. Kettles, 50 to 200 gals. Send for List.
5—Pfaudler Glass Lined Storage Tanks, 500, 300 and 200, 180 gals.
5—Stokes Single Punch Tablet Machines, "N" and Eureka.
4—Frazer heavy duty Tablet Machines making a tablet up to 2".
16—Aluminum Steam Jack. Kettles, 100, 80, 60, and 40 gals.

Miscellaneous: Filter Presses from 18"x 18" to 36"x36"; Day Sifters and Mixers; Colton and Stokes Tube Fillers, Tube Closers and Tube Clippers; Copper Jacketed Kettles; Tanks; Extractors; Pulverizers; Pumps; Dryers; Drug Mills; Ointment Mills; Powder Fillers; Oscillators; Granulators; etc. Send us your inquiries.

CONSOLIDATED PRODUCTS CO., Inc.
18-21 Park Row, N. Y. C. Barclay 0600
Send us a list of your surplus equipment.

FOR SALE—Filter Presses; Powder Mixers, capacity 50 to 3,000 lbs.; Tube Fillers, Closers and Clippers; Copper and Aluminum Kettles; Tanks; Portable Mixers; Ointment Mills; Powder Fillers; Glass Enamel Tanks; etc. Send for complete lists Stein-Brill Corp., 25 Church St., New York, N. Y. Phone, Barclay 4850.

FOR SALE—Several aluminum and copper steam jacketed kettles, also glass lined tanks and electric portable mixers. Storms-Harvey Co., 50 West 3rd St., New York.

Professional Service

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FOOD RESEARCH LABORATORIES, Inc.
Philip B. Hawk, President
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Standardization of Pharmaceutical and Vitamin Products
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Analytical and Consulting Chemists
Pharmaceutical and Chemical Research
Process and Formula Development
Food, Drug and Water Analyses
Legal Testimony
636 Race Street — Philadelphia, Pa.

FOSTER D. SNELL, A. M., Ph. D.
Consulting Chemist
RESEARCH CONSULTATION — OPERATION MANAGEMENT
130 Clinton Street — Brooklyn, N. Y.
Laboratory, 35 Myrtle Avenue

Custom House Service

LO CURTO & FUNK
Custom House Brokers and Foreign Freight Forwarders
One Broadway — New York, N. Y.
Telephones: Digby 8570, 8571, 8572

Miscellaneous

CAPSULES: Headquarters for Filled Capsules. Stock or private formulas. Bulk or retail package. H. Planten & Son, Inc. (Founded, 1836), 95 Henry Street, Brooklyn, New York.

SUPPOSITORIES—Antiseptic vaginal and pile rectal. All sizes, shapes, weights. Private or stock formula. Boxes labeled, cartoned complete. Write for samples and prices.
SOUTHPORT CHEMICAL CO.
261 Greenwich St., New York City.

by confining oneself to a small section to start with, it is remarkable how quickly other parts get to hear of the new article on the market.

The Chinese druggist and medicine dealer is ever ready to co-operate with the manufacturer who is trying to introduce a new line, and there is little risk in supplying him with a small consignment. If he finds the item selling, payment is assured. It is customary in this trade to grant sixty days' credit to the large and sound Chinese stores. As the lines become better known, all Chinese drug stores will wish to stock them, and one can then make his own terms. As regards prices, a discount of 25 per cent, to 33⅓ per cent. is often allowed the dealer from the retail selling price, but it is hardly possible to control the latter in China, as the Chinese are most capable bargainers, and a price shown in the window does not mean the actual selling price, after the usual haggling.

Advertising, as in other countries, plays the greatest part in selling drugs and patent medicines in China. There are approximately 350,000 foreigners in China, who by themselves alone create a fair demand for drugs and medicines. The various nationalities are well represented by newspapers written in their respective languages—English, French, German, Russian, and Japanese. Methods of advertising for foreigners are the same as elsewhere, and need, therefore, not be discussed here.

When advertising in the native Press, it is most advisable to have expert Chinese translators prepare advertising matter and Chinese artists design pictorial advertisements. It is useless to try to present foreign ideas in a foreign way: they must be presented to appeal to the Chinese mind. The Chinese pay attention even to small unimportant details and discuss them among themselves. Newspapers are passed from hand to hand, and even if Chinese papers have not the same circulation as do foreign, they have as many readers, if not more. All printing, designing, and making of electros should be done in China, where printing etc. is cheaper and efficient labor is available. Distributing handbills is also another effective method of advertising in China, and electric signs are also increasing. Every firm should issue a calendar, specially designed for the Chinese New Year, with a picture of a Chinese girl in semi-Western or Chinese dress. This is hung up in every Chinese home and kept throughout the year for the purpose of discovering "lucky" and "unlucky" days for funerals, weddings, parties, etc. Representatives going to China to stay several years should not fail to acquire a speaking knowledge of Chinese, which is a great asset when dealing with the natives.

In conclusion, China presents an excellent market for patent and proprietary medicines, and the present disturbed state in that country should not make exporters or manufacturers here pessimistic, for Chinese "wars" are not the same as wars are in the West, nor do they preclude business.

Purity

The U. S. P. X. provides four safeguards for buyers of PETROLATUM LIQUIDUM. They are tests for ACID, ALKALI, SULPHUR COMPOUNDS and CARBONIZABLE substances. ALBINOL Genuine Russian Mineral Oil tests as follows:

ACID — **NEGATIVE**

ALKALI — **NEGATIVE**

SULPHUR COMPOUNDS — **NEGATIVE**

CARBONIZABLE Substances — **PASSES GOOD**

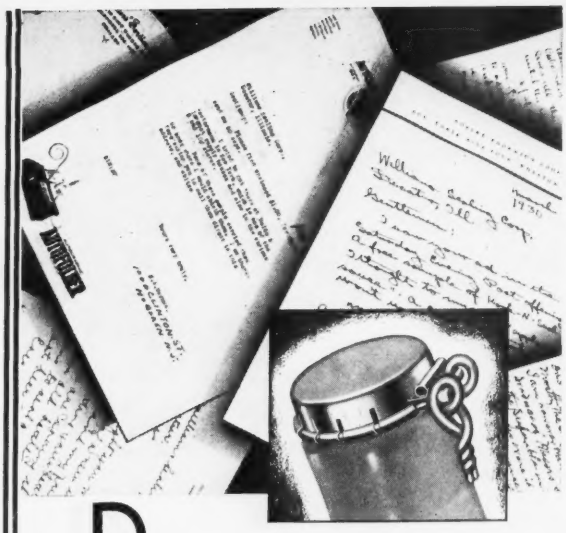
The latter test is probably the most *important.* The U. S. P. X. prescribes in the last named test that the C. P. Sulphuric Acid used in the test must not turn darker than "Pale Amber" and that the OIL remain unchanged in color.

In testing "ALBINOL" the C. P. Sulphuric Acid used does not even approach a "Pale Amber" and except for a "slight haze" *remains the same color as originally.* It is therefore **MUCH BETTER** than U. S. P. A comparative test against other oil is welcomed.

Schliemann Companies, Inc.

53 Park Place, New York, N. Y.

REFINERY IN HAMBURG, GERMANY



People write in by the hundreds ..unsolicited

"I have had such wonderful satisfaction using your remarkable little cap . . ."

"We save our Kork-N-Seal tops that come on So-and-So for ginger ale . . ."

"I wish other manufacturers would use such a handy cap . . ."

Et cetera, gentlemen, *et cetera!* We could almost lead a filibuster by quoting from the correspondence that comes in to us regularly.

A number of makers of drug products have taken advantage of this universal appeal of Kork-N-Seal. They have proved over and over that Kork-N-Seal's advantages are not just a matter of conversation, but of *actual consumer preference*.

Do their salesmen, too, appreciate the extra order-clinching facts that this newer, better method of sealing provides? Ask them! And let us send you a boiled-down summary of facts, or answer any questions you have in mind. Write today!

WILLIAMS SEALING CORPORATION
DECATUR, ILLINOIS

Williams
KORK-N-SEAL
THE CAP WITH THE LITTLE LEVER

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